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ORIGINAL COMMUNICATIONS.

ARTICLE I.

CHRONIC ADHESIVE PERIMETRITIS.

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Definition and Nature.—Perimetritis is inflammation of the pelvic peritoneum. This term was first proposed by Professor Virchow in 1862. He bases this name on its analogy with pericarditis.

M. Bernutz names this inflammation "*Pelvi-Peritonite.*" Scanzoni calls it "*Pelveo-Peritonæitis.*" Courty, "*Inflammation Peri-uterine.*"

Perimetritis is rarely idiopathic; it is nearly always symptomatic. It is possible that it may arise from direct injury, but in such cases it is as justifiable to suppose that some other organ—as the bladder, ovary, uterus, bowel or fallopian tube—

was the *first* to become inflamed, and the peritoneum *afterwards* became inflamed, as to contend that the peritoneum was the first to take on inflammatory action.

In nearly all cases of perimetritis the inflammation arises from an irritation applied to the peritoneum from the condition of the pelvic organs incident to menstruation, or from causes presented by the condition of the pelvic organs in the course of their diseases or abnormal conditions, which will be presently considered. It is never seen after the menopausis.

Frequency.—In a large gynecological practice one is surprised to meet with so many cases of perimetritis. In the virgin and in the child-bearing woman we find it exceedingly frequent. The one means of examination—*conjoined mainpulation*—almost at once reveals its presence. By touch we soon exclude cellulitis and extraneous pelvic growths, and obtain the tenderness and difficulty of movement of the uterus which plainly indicate adhesions. Speculum examinations also reveal, especially in virgins and women who have not borne children nor had a blenorrhagia, the peculiar vascular changes which clearly indicate impaired circulation in the uterus. Winckel states that he found perimetritic adhesions in more than 33% in all autopsies of women. Courty affirms that about one-third of uterine diseases is perimetritis. Aran found pelvic peritoneal adhesions and evidences of previous inflammatory action in 55% of women examined post-mortem. He states that "adhesions were twice as common in women who had borne children as in women who had not." Heitzmann affirms, in 1883, that fully three-fourths of Professor Bandl's clinic present evidences of past or present perimetritis.

Duncan states that "In women not recently confined, dis-

eases of the genital organs and accidents, surgical or other, lead to adhesive perimetritis more frequently than to pelvic inflammation of any other seat or nature."

The remarkable frequency of this condition certainly demands careful study. It is a matter of great surprise to me that so little is written upon this topic.

Anatomical Considerations.—It is of the utmost importance that our knowledge of the peritoneal relations be exact. Let us review them briefly:

The pelvic portion of the peritoneum presents the appearance, when viewed from above, of having been pushed up from beneath, from the bottom of the pelvis, by the uterus, its appendages and the bladder. Upon sawing perpendicularly through the frozen female pelvis from the symphsis pubis to the middle of the sacrum, and removing the abdominal viscera in order to dissect with ease, it will be found everywhere that the pelvic organs push up the peritoneum, the latter is protected from absolute contact with them by a film of connective tissue, thin in all places and very thin in a few of them. This connective tissue is called a "muscular platysma" by Savage, and furnishes, he says, for the most part, the surgical interest of the pelvic peritoneum. Its peculiar structure can be studied in the reduplications of the peritoneum.

The impression cannot be escaped when one considers the ubiquity of the peritoneum in the upper part of the pelvis, folded around every one of its organs to a greater or less extent, and projected between them in the shape of folds and ligaments, that Nature intended to crowd as much of this organ into the pelvic cavity as could be well accommodated there.

The Broad Ligaments.—These ligaments are composed of the two layers of peritoneum passing from the anterior and

posterior surfaces of the uterus outwards and backwards to seek attachment to the pelvic wall just anterior to the sacro-iliac synchondrosis, the layers separating at the points of their attachment and at their bases. Containing between their laminæ the fallopian tubes, ovaries, blood-vessels, lymphatics, connective tissue and unstriped muscular fiber, they present the beginnings of many attacks of pelvic peritonitis—consequently their anatomy and relations cannot be too thoroughly known.

Their position varies according to the location of the uterus. Normally they lie obliquely, their posterior surfaces looking upwards and backwards, and their anterior surfaces looking downwards and forwards. In pregnancy they are drawn up and lie almost vertically. In backward displacements of the fundus they are twisted longitudinally coincidentally with the degree of the displacement. It will be found in many patients that the greater the retroversion or the retroflexion the stronger are the objective symptoms of chronic perimetritis, doubtless facilitated in its access primarily by the uterine displacement.

The broad ligaments and the uterus divide the pelvic peritoneal cavity into two unequal divisions. The anterior cavity contains the bladder only, and is much the smaller of the two. The posterior lamina of the broad ligaments extends farther downwards than the anterior, especially in the middle, covering the upper and posterior part of the vagina. The anterior lamina dips down only to the level of the internal os uteri, and is then reflected on to the bladder.

Viewed from above, the broad ligaments present the appearance of having three minor folds embracing from before backwards the round ligament, fallopian tube and ovary respectively. These folds occupy the posterior fossa of the peritoneal

cavity. Inflammation of the pelvic peritoneum commences more often in the posterior than in the anterior fossa, and anatomical relations explain the reason therefor. When the fundus uteri is turned backwards its malposition constitutes one of the etiological factors of perimetritis. Fluid escaping from the fallopian tubes, whether it be purulent, gonorrhœal, sanguineous or medicated, will be deposited in the posterior pelvic peritoneal fassa and produce perimetritis.

The Utero-Sacral Ligaments, or Folds of Douglas.—These ligaments are crescentic layers of peritoneum reflected from the broad ligaments above them, and muscular platysma containing muscular fibres from the vagina and uterine cortex (Savage), which pass from the lower, lateral part of the uterus, opposite the os internum, at about the insertion of the vagina, outwards and backwards for insertion to the inside of the sacro-iliac symphysis at the third sacral vertebra, and, often, above as high as the promontory, or the anterior and lateral part of the last lumbar vertebra. (Huguier). They form the upper and lateral boundaries of the fossa of Douglas, which communicates with the peritoneal cavity through a lumen between these ligaments. In this lumen lies the empty large intestine. In the normal state they act as one of the factors of the support of the uterus *in situ naturale*, contributing to prevent downward and forward displacements of the cervix.

The Fossa of Douglas.—This fossa is a pouch of pelvic peritoneum lying between the uterus and vagina anteriorly, and the rectum and sacrum posteriorly. It is, anatomically, the lowest projection of the peritoneum. This cavity is of the gravest importance practically. It can easily be explored through the vagina and rectum. The utero-sacral ligaments bound it above, and, below it, usually extends to the vaginal

fornix. Exceptionally it extends to the floor of the perineum. (Pirogoff).

Unrestricted by adhesions, this cavity may attain dimensions equal to the cavity of the pelvis, exclusive of the thickness of the rectum, vagina and bladder. Into this cavity various organs—as the small intestine, the fundus uteri, or the ovary, or even an extra-uterine fœtation—may protrude. Serous, sanguineous or purulent fluids are frequently found in it. And lastly, the fibrinous adhesions of perimetritis are often found in this cavity. Its dependency makes it especially liable to take on inflammatory action from the invasion of exciting causes from above.

Its distensibility and capacity for dislocation are astonishing. It has repeatedly been found protruding from the vulva, pushing the posterior vaginal wall before it, and, in other cases, from the anus, pushing the anterior wall of the rectum before it. In one patient I saw the fundus uteri retroverted and retroflexed till it rested on the perineum, and it could be readily grasped by the thumb and finger introduced respectively into the vagina and rectum.

The lowest part of the fossa lies distinctly to the left of the uterus. It is stated that the fossa is of equal depth on both sides, chiefly in old women and in presumed pathological processes. (Barnes). Very often this space can be found empty, and the examining finger can be thrust into it, inverting the peritoneum and feeling the utero-sacral ligaments right and left, presenting various degrees of thickness, tautness and tenderness. In such an examination, best conducted in the anæsthetic state, the finger displaces whatever is in front of it, whether it be the uterus, an ovary, a fold of small intestine, or an extra-uterine fœtation.

The careful differential examination of this space yields,

very often, the most valuable information to the gynecologist. When replete it is always swelled and sometimes descended. When occupied by a solid organ its outline through the walls of the fossa are easily and sharply defined. When filled with hardened lymph, as in the case of *colica scortorum*, its outline is hard, smooth and uniform, and the space is descended partially. When filled with fluid, of which there is a large accumulation above—as blood, serum, or pus—its greatest descent and distention are observed. Often in such cases it fills the whole vagina—nay, even, at times, the whole pelvic basin, so that finding the cervix is difficult, and in some instances impossible. Cutting into the Douglas fossa, when in its natural relations, without doing more than is intended, is only too often impossible; whereas, cutting into it when largely distended is a very easy matter. Indeed, thrusting the finger into it upon making a digital examination occurred once to my friend Prof. Parkes, and it was immediately followed by an enormous discharge of pus. A case of hydatids of this fossa is described, wherein an abscess formed and protruded beyond the vulva, forming a tumor larger than an adult fœtal head. (Duncan). Freund reported a case of great procidentia, where the fossa of Douglas descended unchanged, carrying with it the rectum to the lowest part of the prolapsed mass.

PATHOLOGY.—Three or four forms of inflammatory changes in the pelvic peritoneum are described by authors:

1st. *The Adhesive* form, the commonest of all forms of inflammation of the pelvic organs;

2d. *The Suppurative* form, the most important because of its frequently fatal termination; and

3d. *The Serous* form, the rarest of all forms of pelvic peritoneal inflammation.

To the foregoing subdivision, some writers add:

4th. *The Sero-Adhesive* or *Sero-Encysted* form, a combination of the first and third forms.

I desire to call attention to the chronic stage of the adhesive form of perimetritis. We see perimetritis very often in its chronic stage, and but rarely in its acute stage.

When we reflect that all inflammation is *active*, it would almost seem that *chronic* inflammation is paradoxical. One writer goes so far as to declare that there is, strictly speaking, no such process as *chronic inflammation;* while, upon the other hand, some inflammations are said to be "*chronic*" from their inception. (Courty.) However, I wish to include in this article those cases which have passed beyond the first or acute stage, as so understood, attended by constitutional disturbance of a pyrexial character.

The etiology of perimetritis will be better understood if we bear in mind that serous membranes are simply modifications of the unformed connective tissue of the body which may be regarded as a "continuous whole in which the nervous and muscular fibres, bone and cartilage, epithelial tissues, etc., are embedded. * * * * The connective tissue of the serous membranes is uninterruptedly continuous with the interstitial connective tissue of those organs which they invest. The inference from this is plain: that the serous membranes may and do, in fact, take part in all the morbid changes to which the interstitial connective tissue of those organs is liable." Bearing this fact in mind will enable us to understand how an inflammation of any of the pelvic organs may eventuate in a pelvic peritonitis. (Rindfleisch.)

The course of the inflammatory process is determined in accordance with the respective intensity and quality of the great variety of irritants producing it. The process observed

in the acute stage is a reddening of the peritoneal surface, which is the capillary engorgement preceding the migration of the colorless blood corpuscles, fibrin and serum. From this point the further histological metamorphosis tends to one of three directions, viz.:

1st. Towards *Resolution—i. e.*, to the absorption of the exudation and a return of the peritoneum to the condition in which it was before the inflammation set in;

2d. Towards *Organization*, wherein the well-known "bands of adhesion" are found; and,

3d. Towards *Suppuration.*

Cases terminating in resolution may be said not to pass into the chronic stage at all, because the steps towards the pathological acme and back again to health are so rapid that none of the appearances of slowness of changes so commonly associated with the chronic form of inflammation are herein seen. It may be well to remark that very many cases of this form of perimetritis occur after miscarriages and labor at full term, when the patients are confined to the bed and are thus subjected to the best of all therapeutic measures for this malady, viz., *rest.* Cases terminating in speedy resolution without doubt have causes that are comparatively mild in their force.

Cases terminating in organization are usually insufficiently considered by writers. After the *fibrinous* exudation has ceased its active movement it becomes physiologically equivalent to embryonic tissue, developing (1) the round into the spindle-shaped cells, whose processes touch each other and then become fused together, and, later, (2) the process of vascularization. The *serous* exudation either remains free in the pelvic cavity, or becomes encysted by the formation of false membranes, or is absorbed. After the fibrinous exudation has become organized the pelvic organs will become

anchylosed to a degree *pari passu* with the amount of the exudate. By digital examination the part of the pelvis above the vagina will be found as "hard as a deal board," the normally movable organs above being matted together and quite indistinguishable by conjoined palpation. This stage constitutes a point of departure for very many cases wherein the organized material slowly disappears by absorption, stopping at almost any point from the slowest possible advance up to its complete disappearance. The rarest of all forms of perimetritis, viz., the serous form, is developed right here where the plastic exudate has nearly disappeared, and the encysted collections of serum remain, above, unaffected. Where neither exudate nor serum is wholly absorbed we have the *sero-adhesive* form of perimetritis which some authors have seen fit to mention especially. Two explanations for the increase of the serous fluid exist: One is, the increased peritoneal exhalation from retarded venous circulation from cardiac, hepatic or renal disease; and the other is, diminished absorptive capacity of the peritoneum. When a portion of peritoneum becomes inflamed its absorbing power is decreased, and where sealed spaces formed by inflammatory agglutinations of the pseudo-ligaments of perimetritis are found, serous accumulations will form of varying size. In this way serous cysts arise around the uterus. They are very commonly found in the fossa of Douglas. They vary infinitely in size, from that of a mustard seed up to that of a fœtal head. Now and then they attain to a large size, and they have been diagnosticated and operated on as ovarian cysts. M. Huguier, in 1847, suggested that the spontaneous cures of alleged ovarian cysts, after tapping, were really cures of cysts about the uterus and not cysts of the ovary.

Many cysts of the broad ligament have their origin in adhe-

sive perimetritis. It is well known that they are usually not large, and are monolocular. When we consider the fact that sealed spaces in chronic perimetritis are at first small and may include in their extent a small surface of peritoneum capable of exuding the fluid of these cysts, we readily understand why they are monolocular and why the increase in the amount of fluid will cause an increase in the capacity of the cyst walls till pressure from within or extraneous influences cause a cessation of serous exudation into the cyst, and thus allow it to remain the same in size indefinitely. I have in my possession, from one of my oöphorectomy cases, a broad ligament cyst of this kind. The cyst walls are composed of exudation covering the broad ligament anteriorly, and they had a capacity of about two ounces.

Another fact of pathological interest is the co-existence of serous and suppurative perimetritis in the same patient. A sealed chamber of serum may exist in the same pelvis wherein a suppurative accumulation exists. I have no means of knowing whether they usually develop in the course of the same inflammatory attack or from separate attacks. It can be readily seen that it is possible for them to develop together or separately. Last month, for Dr. Dodge, of this city, I opened an abscess, as I supposed it to be, by cutting into the bulging fossa of Douglas. The patient had been ill in bed for six weeks with the usual clinical history of perimetritic abscess. I was astonished to see a great flow of serous fluid—about twenty ounces, I should say. We left the patient, protesting our chagrin after such an apparently clear clinical case of suppurative inflammation. The next morning we were still more astonished to learn that during the night the abscess itself had broken spontaneously into the rectum and discharged very freely. In this patient suppurative and serous perime-

tritis co-existed. She had been complaining several months previously, and it is highly possible that the serous accumulation was of a more ancient origin than was the purulent accumulation. The sudden supervention of the pains, rigors and fever six weeks prior to operating, clearly indicated the history of the suppurative development.

The *location* of the exudation at once reveals the fixation of the pelvic organs. In severe cases the uterus, tubes, ovaries, bladder and rectum are seen to be held in an unyielding grip. The fossa of Douglas is more or less bulging. Any previously existing version or flexion of the uterus is found to be more pronounced. The pressure on the pelvic nervous supply often forms a conspicuous feature of the disorder. The same pressure also changes the physiological functions of menstruation and conception in the majority of cases. Often the exudations are found above the pelvic inlet and in the iliac fossæ.

The *amount* of the exudation, as shown by the extent of the adhesion, is exceedingly variable. The fixation of the pelvic organs ranges all the way from the slightest stiffness of movement of them by conjoined manipulation up to their complete immobility. The adhesions are found most commonly about the tubes and ovaries when very small in extent. They are seen of all kinds of density, but frequently as "bands of length and thickness such as only imperfectly to impede motion—evidence in themselves of a gradually progressing change from close adhesion to complete loosening." (Duncan). Such small adhesions about the tubes and ovaries are doubtless the last remnants of previous perimetritis.

The length of time of the presence of the adhesions varies almost indefinitely. Very many patients present cases of pelvic peritonitis, with *partial* anchylosis of the pelvic organs, after a menstruation, which almost completely disappear before

the next menstruation. Again, we will find cases of *complete* anchylosis of the pelvic organs, resulting, *e. g.*, from miscarriages, which will completely disappear in from four to eight or twelve weeks. Then, again, we meet with cases wherein there is *permanent* anchylosis, *i. e.*, where it persists for years.

Generally speaking, the ultimate tendency of pelvic inflammatory exudate is towards its spontaneous absorption. Many cases are "cured" by a pregnancy, wherein they are stretched into bands so fine that their nutrition is practically cut off, and they remain after parturition as shrivelled up, elongated attenuations of tissue, devoid of any power to fix the uterus. Herein we have the explanation of the improvement in general health so often met with in women who are "much healthier" after a confinement than they were before it.

If we accept the usual movements of the pelvic organs incident to the movements of the body, of respiration, of coughing and of sneezing, as the primary cause of irritation leading to absorption of the exudate, we can understand easily how that portion of the adhesions about the ovaries and tubes should persist after all the others had disappeared, because of the diminished motion of those organs.

The variation of dislocation of the tubes and ovaries cannot be even approximately described. Sometimes the ovary is distorted and fastened by a few membranes; then, again, it is so imbedded in a mass of bands and membranes that it is found only with the greatest difficulty. "Thus the left ovary may lie in a curvature of the sigmoid flexure and the right may be adherent to the vermiform process in a mass of exudation." Sometimes the uterus becomes imbedded in false membranes and undergoes premature atrophy. The ovary may undergo the same process. The fallopian tubes may become compressed and even detached from the uterus. Their ends are

often stenosed or sealed hermetically, and their lining membrane may go on pouring out purulent or serous fluid according to their condition previous to the occlusion, and thus the tubes become enlarged to an enormous extent, presenting so-called cases of pyo and hydro-salpinx. Where the contained fluid is blood—the fluid most rarely found in fallopian occlusions—the case is called haemato-salpinx. Peaslee describes a case of fallopian distension wherein eighteen pounds of fluid were contained. Adhesions between contiguous coils of intestine may lead to attacks of constipation of a most rebellious character, alternating with diarrhœa and colic. Active cell proliferation in the connective tissue of the outer muscular uterine fibres leads to the development of an inelastic capsule over the uterine parenchyma, which becomes a prolific cause of abortions where pelvic peritonitis has previously existed. A similar condition existing around the ovary prevents the bursting of a ripened follicle, and gives the first impulse to the development of an ovarian cyst in some cases, and leads to barrenness in all cases thus elaborated. A large proportion of displacements of the uterus is doubtless due to perimetritic exudations and adhesions, which, when unrelieved, lead to abortions and sterility. Occasionally the plastic exudate becomes vascularized and hyperæmieted to the point of causing hemorrhages by a repetition of inflammatory attacks, and we have then a new danger to deal with, viz.: *hematoceles.* This condition has been denominated *hæmorrhagiparous pachy-peritonitis.*

ETIOLOGY.—In considering the causes of perimetritis we must never lose sight of the fact that it is rarely, if ever, idiopathic. I have never seen a case that was not secondary to some previously induced pathological condition. By far the largest number of cases arise from uterine, tubal and ovarian disorders.

The following causes of pelvic peritonitis may now be considered in detail:

I. Menstrual disturbances.
II. Pregnancy terminating in abortion or full-term delivery.
III. Gonorrhœa.
IV. Traumatism.
V. Pressure.
VI. Parametritis.

I. The influence of cold upon the menstruating woman must be regarded as one of the most prolific causes of perimetritis. Every month the uterus and its adnexa are congested to a superlative degree, and it becomes an extremely easy matter, pathologically, to convert this normal into an inflammatory condition. The inflammation, once started, is limited in its ulterior progress only by conditions not now fully understood. As elsewhere stated in this paper, perimetritis may cause almost no inconvenience at the time of its progress, or it may result in a permanent invalidism, or even death. Between these two extremes we will find every grade of severity of pathological developments and symptomatology.

The etiology of adhesive perimetritis will undoubtedly, in the largest number of cases, be found in the partial or complete suppression of the menses from cold. The latter may be applied in a variety of ways, either by exposure, by getting wet in storms, by sitting on cold stone steps, immersing the hands in cold water, washing the genitalia in cold water, getting the feet cold, sleeping in damp sheets, eating cold ices, etc., etc. Occasionally it will be found that cold, between menstrual epochs, will produce perimetritis.

Any sudden diminution or suppression of the menses is very liable to produce perimetritis. Gradual diminution of the flow leading up to its disappearance is liable to result in

this inflammation. Within the past year I saw a patient decreasingly menstruate for three consecutive months, and on the fourth she failed to flow at all, but developed a perimetritis instead. Incomplete menstruation from no apparent cause may be the cause. Occasionally, without known cause, the flow will cease and perimetritis will follow—a condition which Tarnier has denominated "a puerperal fever occurring in the course of menstruation." Severe mental emotion will also cause a suppression of the menses, which may eventuate in perimetritic inflammation. Local treatment during menstruation may also produce this malady. The same may be said of excessive sexual intercourse during menstruation.

II. Bernutz presented ninety-nine cases of perimetritis, with their causes, and he attributed forty-eight cases—by far the largest number under any one etiological factor—to the puerperal condition. Puerperal perimetritis includes all cases arising in the puerperal condition, whether the pregnancy has terminated in full term or premature delivery. Whether the causation result from sepsis, or from an extension of the inflammatory condition from the uterus, it is not always easy to decide—in fact, it would be extremely hard to decide, in the majority of cases. Too early rising from confinements must be regarded as a common cause of perimetritis. Any indiscretions of the puerperal patient which would produce peritoneal inflammation would be comparatively harmless at any other time; hence the conclusion must be reached that puerperality is an important etiological factor in this disease. When the very large number of cases of perimetritis that exist is taken into consideration, I think that the parous condition will be placed second to menstrual condition as an etiological factor.

III. Gonorrhœal inflammation, extending along the endo-

metrium into and through the fallopian tubes to the serous membrane, is communicated to that organ with unerring certainty. Nearly, if not quite, all women who have a blenorrhagia, sooner or later develop perimetritis. In this manner develop cases of *colica scortorum.* Bernutz denominates this condition—gonorrœhal perimetritis—"a veritable feminine orchitis." However, the resemblance of epididymitis to pelvic peritonitis was first enunciated by Rochoux in 1833.

IV. Violence, in its multiform applications, can produce this inflammation. Sounding, curetting, tents, stem pessaries, cutting operations in the uterus, the application of the solid nitrate of silver to the interior of the cervix, injections of fluid into the endometrium, venereal excesses and chancrous ulcerations on the cervix have produced pelvic peritonitis. Thomas includes, also, "blows, falls, injury during labor, and punctures" as kinds of violence producing this malady.

V. Pressure arising from an enlarged uterus, flexions and versions of the uterus, an enlarged or displaced ovary, chronic constipation, pessaries, an ovarian cyst, myomas, carcinomas and hematoceles may give rise to pelvic peritonitis.

VI. Parametritis is in most cases accompanied by perimetritis of various degrees of intensity. The former may, and undoubtedly often does, develop or run its course without the latter, in mild cases. Chronic parametritis of comparatively long standing, without an accompanying perimetritis, may become a cause of a renewal of an acute cellulitis, which in course will produce a severe perimetritis, eventuating even in suppuration. Within the past two months I have attended three such cases.

COURSE AND SYMPTOMS.—For convenience of description of the course and symptoms of pelvic peritonitis, we may divide cases into two classes, viz.: (1) *Mild cases* and (2) *Severe cases.*

1. *Mild* cases may run their course, unobserved at the time,

at least, by the physician. They comprise by far the largest proportion of all cases of adhesive perimetritis. I think it is safe to assert that the vast majority of mild cases arise in the course of menstruations where *cold* is the etiological factor. The menstrual discharge is diminished, and is accompanied by pain in the hypogastric region in varying degrees of intensity. This pain is such a common symptom that, usually, domestic remedies only are used, such as rest, hot applications externally, and stimulating drinks. The pains soon cease, the menstrual period passes by in due time, and the patient resumes her usual habits. In the mildest cases all symptoms cease at this time, and, at most, are experienced at one or two subsequent menstrual epochs, or they do not recur again till a fresh cause is applied. In the severer of the mild cases the patient continues to suffer at each subsequent menstruation. In a small proportion of these severe cases the patients have the dysmenorrhœal sufferings every second month, the alternate months no suffering being experienced. If it be true that each ovary is active only at every second menstrual period, it is possible that the explanation of the pain supervening at alternate menstruations only lies in the fact that one ovary is involved in perimetritic adhesions, while the other is free from them.

Very commonly after the commencement of adhesive perimetritis the patient can recall at some one menstruation, she was dysmenorrhœic for an indefinite period only—*i. e.*, pain at menstruations is the only trouble complained of. Sooner or later—it may be one month and it may be one year or longer—she evinces symptoms of inflammatory changes in the uterus, or of uterine dislocation. These symptoms intensify till her general health suffers, and then it is that she seeks medical advice. This period varies anywhere from one month to years after the initial departure from health. In

these cases it is most interesting to trace the steps of the malady from its inception to date. Only too frequently the defective memory of the patient prevents the tracing the anamnesis. Very many times the patient voluntarily states the time when the suppressed, painful menstruation occurred, and adds, "And since that time I have never been as well." Without painstaking in tracing out the history of these cases, gynecologists are only too often led to say that this malady will run its course unobserved. In many of the cases of perimetritis the only evidence of it ever adduced is found in the adhesions found post mortem.

2. *Severe cases.*—In this class of cases the symptoms are more pronounced. The pain is severe, the febrile movement decided, and the constitutional symptoms marked. A chill may or may not precede the other symptoms.

The physician who tries to make the initial symptoms tally with the ensemble of symptoms of general peritonitis will signally fail. The constitutional depression associated with the latter grave malady will be conspicuously absent.

The symptoms most commonly present in the acute stage are:

(*a*). Pain.
(*b*). Tenderness.
(*c*). Febrile movement.

Additionally, there are often:

(*d*). Nausea, vomiting and tympanites.
(*e*). Bladder and rectal irritability, and bearing down.
(*f*). Anxious facies and delirium.

I desire to speak especially of pain, only by way of amplification. It is found present in all possible degrees of difference. Many patients experience it but seldom, at long intervals, while

others may be said never to be free from it, and between these two extremes are found all shades of its variations.

The most complaint of pain is made at the menstrual periods —in other words, dysmenorrhœa is a very common feature of perimetritis. *Per contra*, one will be surprised, whose attention has not especially been directed to this subject, to learn how many cases of dysmenorrhœa have chronic perimetritis for their cause.

Pains denominated "*neuralgic*" in character are an extremely common feature of this malady. They are very commonly called "enteralgia" and "ovaralgia," the supposed pathology being in the bowel and in the ovary. They are induced or exaggerated by various causes, notably by cold, fatigue and mental emotion. Patients harassed by such pains go from one doctor to another, unrelieved, till a fresh attack of inflammation, resulting possibly in abscess or in permanent invalidism follows. Times without number, almost, have I been told by patients that, when they are *chilled*, they will have pains in one or both groins, or in the entire hypogastric region, extending in many instances down the thighs, or around to the back, or up to the hypochondria, or, as one patient expressed it, "from her ribs to her knees." Again they will complain that, when fatigued, sharp, shooting pains pass through the lower abdomen, till rest or stimulation can restore their nervous balance. Occasionally mental depression will be followed by these pains. One patient informed me that moving suddenly, "any jarring, as jumping or being pulled around by another person," always produced a series of pelvic pains which were relieved only by opium or alcohol. Many patients are compelled to abandon singing, by the "abdominal method," because of the suffering induced thereby.

COURSE AND SYMPTOMS.—Later, some or many of the following symptoms will be noticed:

(*a.*) Sensitiveness, which continues for a long time and easily returns.

(*b.*) Abdominal pressure, from exertion or otherwise, causes pain.

(*c.*) Moving the uterus, often excessively tender.

(*d.*) Displacement of ovaries and tubes.

(*e.*) Sterility.

(*f.*) Menorrhagia.

(*g.*) Amenorrhœa.

(*h.*) A tumor, or a matting together of all the organs above the vaginal vault. Often arterial pulsations at its base are found. (Nonat.)

(*i.*) Uterine cervix movable, while the fundus is immovably fixed, "as though nailed to the sacrum." (Duncan.)

(*j.*) Douglas's fossa filled with adhesions often containing the fundus uteri, an ovary, or a coil of small intestine.

(*k.*) Irritability or neuralgia of the uterus.

(*l.*) Reflex paralysis.

(*m.*) An obstinate sciatica.

(*n.*) Extrauterine or tubal pregnancy.

(*o.*) Recurrent attacks of perimetritis.

(*p.*) Hematoceles from hemorrhagiparous peritonitis.

(*q.*) Hysteria; insanity.

(*r.*) Alternate constipation and diarrhœa.

Diagnosis.—Absolute correctness of diagnosis in all cases is impossible of attainment. Furthermore, the advantage to be gained from exactly diagnosticating the location of periuterine inflammations is often of no special value in treatment.

(*To be continued.*)

ARTICLE II.

A SYNOPSIS OF THE MEDICAL BOTANY OF ILLINOIS. *By* I. M. C. CARTER, M. A., M. D., PH. B.

(*Continued from August Number.*)

Order Cistaceæ (Rock-rose Family). 2 genera, 2 species:

Genus Helianthemum (Rock-rose). H. Canadense (Frostweed). Medical properties: Aromatic, alterative, tonic, astringent, slightly bitter.

Genus Lechea (Pinweeds). L. major (Pinweed). Medical properties: Tonic, antipyretic, antiperiodic.

Order Drosceraceæ (Sundew Family). 1 genus, 2 species:

Genus Drosera (Sundew). D. longifolia (Long-leaved Sundew); D. rotundifolia (Round-leaved Sundew). Medical properties: Acrid, detergent, rubefacient, pectoral, aphrodisiac.

Order Hypericaceæ (St. John's-wort Family). 2 genera, 4 species:

Genus Hypericum (St. John's-wort). *H. perforatum*, or H. officinale (Common St. J.); H. mutilum (Low Century); H. sarothra (Nitweed, Pinweed, Orange-grass). Medical properties: Bitter, aromatic, astringent, tonic, resolvent, nervine.

Genus Elodes (Marsh St. John's-wort). E. Virginica. Medical properties: Same as preceding genus.

Order Caryophyllaceæ (Pink Family). 7 genera, 8 species:

Genus Lychins (Lychins Cockle). *L. githago* (Corn Cockle). Medical properties: Seed—acrid, depurative, purgative; root—astringent, vulnerary.

Genus Silene (Catchfly Campion). *S. inflata* (Bladder Campion); S. Virginica (Fire Pink Catchfly). Medical properties: Nervine, vermifuge (like Spigelia).

Genus Saponaria (Soapwort). *S. officinalis* (Bouncing Bet,

Soapwort, Benisewort). Medical properties: Tonic, diaphoretic, alterative, antisyphilitic.

Genus Vaccaria (Cow-herb). *V. vulgaris* (Field Soapwort). Medical properties: Seed—diuretic; plant—galactagogue.

Genus Cerastium (Mouse-ear, Chickweed). *C. vulgatum.* Medical properties: Refrigerant, nutrient.

Genus Stellaria (Startwort, Chickweed). *S. media* (Common Chickweed). Medical properties: Alterative, mucilaginous, demulcent, refrigerent, discutient, detergent.

Genus Mollugo (Indian Chickweed). M. verticillata (Carpet weed). Medical properties: Refrigerant, diuretic.

Order Portulacaceæ (Purslane Family). 1 genus, 1 species:

Genus Portulaca (Purslane). *P. oleracea* (Common Purslane). Medical properties: Antiseptic, diuretic, aperient, vulnerary. Also called Pursley.

Order Malvaceæ (Mallow Family). 4 genera, 7 species:

Genus Malva (Mallow). *M. rotundifolia* (Round-leaved M.); *M. sylvestris vel M. vulgaris* (High M.). Medical properties: Mucilaginous, diuretic, emollient, pectoral.

Genus Sida. *S. spinosa.* Medical properties: Diuretic, demulcent.

Genus Abutilon (Indian Mallow). *A. avicennæ* (Velvet Leaf). Medical properties: Demulcent, mucilaginous, diuretic.

Genus Hibiscus (Rose Mallow). H. moscheutos (Musk Seed, Swamp Rose M.); *H. trionum* (Bladder Keturia); *H. esculentus.* (Gumbo, Okra). Medical properties: Mucilaginous, demulcent.

Order Tiliaceæ (Linden Family). 1 genus, 1 species:

Genus Tilia (Linden Rosewood). T. Americana (Basswood). Medical properties: Bark—emollient, demulcent, mucilaginous; flowers—cephalic, stimulant, sedative. Also called Linn, Linden, and Lime-tree.

Order Linaceæ (Flax Family). 1 genus, 2 species:

Genus Linum (Flax). *L. usitatissimum* (Common Flax). L. Virginanum (Wild Flax). Medical properties: Demulcent, mucilaginous, emollient.

Order Geraniaceæ (Geranium Family). 2 genera, 4 species:

Genus Oxalis (Wood Sorel). O. stricta (Yellow Wood S.); O. Violacea (Violet Wood S.). Medical properties: Acid, refrigerant, diuretic, antiscorbutic, irritant.

Genus Geranium (Cranesbill). G. maculatum (Wild Cranesbill, Spotted C.); G. Carolinianum (Carolina Geranium). Medical properties: Astringent, styptic, antiseptic, bitter, tonic, febrifuge, nephritic.

Order Rutaceæ (Rue Family). 2 genera, 1 species:

Genus Xanthoxylum (Prickly Ash). Z. Americanum (Northern Prickly Ash). Medical properties: Stimulant, sialagogue, alterative, tonic.

Genus Ptelea (Hop tree, Shrubby Trefoil). P. trifoliata (Wafer Ash, Hop tree, Swamp Dogwood). Medical properties: Same as preceding.

Order Anacardiaceæ (Cashew Family). 2 genera, 9 species:

Genus Rhus (Sumach). *R. cotinus* (Smoke tree, Venetian Sumach); R. toxicodendron (Poison Ivy, Poison Oak): R. radicans; R. venenata (Poison Sumach, Poison Dogwood); R. typhina (Staghorn S.); R. glabra (Smooth S.); R. copallina (Dwarf S.); R. aromatica (Fragrant S.). Medical properties: Tonic, astringent, antiseptic; sometimes rubefacient, vesicant.

Genus Ailanthus. *A. glandulosus* (Chinese Sumach, Tree of Heaven). Medical properties: Nervine, sedative; bark—vermifuge.

Order Vitaceæ (Vine Family). 2 genera, 4 species:

Genus Vitis (Grape). V. æstivalis (Summer Grape); V. cordifolia (Winter, or Frost Grape); V. vulpina (Muscadine, South-

ern Fox Grape). Medical properties: Acid, refrigerant, antiscorbutic, nutrient.

Genus Ampelopsis (Virginia Creeper). A. quinquefolia (American Ivy). Medical properties: Alterative, astringent, tonic, expectorant.

Order Rhamnaceæ (Buckthorn Family). 2 genera, 3 species:

Genus Ceanothus (Red Root, New Jersey Tea). C. Americanus (New Jersey Tea); C. ovalis. Medical properties: Astringent, expectorant, sedative, antisyphilitic, stimulant. Similar in its effects to lobelia.

Genus Frangula (Buckthorn, Alder). F. Caroliniana (Alder, Buckthorn). Medical properties: Astringent, cathartic, anthelmintic. This species is sometimes called Rhamnus frangula.

Order Celastraceæ (Staff Tree Family). 2 genera, 3 species:

Genus Celastus (Shrubby Bitter-sweet, Staff Tree). C. scandens (Wax-work, Climbing Bitter-sweet). Medical properties: Bark of root—alterative, diuretic, hepatic, narcotic, stimulant, antisyphilitic.

Genus Euonymous (Spindle Tree). E. atropurpureus (Wahoo, Burning Bush); E. Americanus (Strawberry Bush). Medical properties: Tonic, alterative, diuretic, laxative, expectorant, antiperiodic; seed—cathartic.

Order Sapindaceæ (Soap-berry Family). 3 genera, 6 species:

Genus Æsculus (Horse Chestnut, Buckeye). Æ. glabra (Fœtid, or Ohio Buckeye). Medical properties: Tonic, febrifuge, narcotic.

Genus Acer (Maple). *A. pscudo-palatus* (Sycamore Maple); A. saccharinum (Rock or Sugar Maple); A. nigrum (Black M. or Sugar Tree); A. rubrum (Red or Swamp M.). Medical properties: Astringent, bitter, tonic, antiperiodic.

Genus Negundo (Ash-leaved Maple, Box Elder). N. aceroides. Medical properties: Similar to preceding genus.

Order Polygalaceæ (Polygala Family). 1 genus, 5 species:

Genus Polygala (Milkwort). P. incarnata; P. sanguinea; P. senega (Seneca Snakeroot); P. polygama (Bitter Polygala); P. paucifolia (Fringed Polygala). Medical properties: Bitter, stimulant, sialagogue, expectorant, diuretic, tonic, diaphoretic, emmenagogue.

Order Leguminosæ (Pulse Family). 14 genera, 21 species:

Genus Lupinus (Lupine). L. perennis (Wild Lupine). Medical properties: Bitter, anthelmintic, emollient (used as cataplasm).

Genus Melilotus (Melilot, Sweet Clover) *M. alba or M. officinalis* (White Melilot, Bokhara or Tree Clover). Medical properties: Aromatic, pectoral, expectorant, diuretic, emollient, discutient.

Genus Trifolium (Clover, Trefoil). T. arvense (Rabbit-foot, Stone Clover), *T. pratense* (Red Clover); T. repens (White Clover). Medical properties: Pectoral, antidysenteric, detergent, depurent, alterative, laxative. Red clover is somewhat noted as a *cancer remedy*.

Genus Amorpha (False Indigo). A. fructicosa; A. canescens (Lead Plant). Medical properties: Alterative.

Genus Psoralea. P. melilotoides. Medical properties: Stimulant, tonic.

Genus Stylosanthes (Pencil Flower). S. elatior. Medical properties: Uterine sedative in gestation, tonic in parturition.

Genus Lespedeza (Bush Clover). L. violacea, var. sessiliflora. Alterative, diuretic.

Genus Tephrosia (Hoary Pea). T. Virginiana (Goat's Rice, Catgut). Medical properties: Stimulant, tonic, antisyphilitic, vermifuge.

Genus Robinia (Locust Tree). R. pseudacacia (False Acacia, Common Locust). Medical properties: Bark of root—emetic, cathartic, expectorant, tonic; flowers—anti-spasmodic.

Genus Lathyrus (Vetchling). L. maritimus (Beach Pea). Medical properties: Emollient; used in poultices,

Genus Baptisia (False Indigo). B. tinctoria (Wild I.); B. leucantha; B. australis (Blue False I.). Medical properties: Alterative, antiseptic, emetic, cathartic, emmenagogue, discutient.

Genus Cercis (Judas Tree, Red Bud). C. Canadensis (American R.). Medical properties: Antiscorbutic. Fruit edible.

Genus Cassia (Senna). C. marilandica (Wild Senna); C. chamæcrista (Large-flowered Sensitive or Partridge Pea); C. nictitans (Wild Sensitive Plant). Medical properties: Cathartic, anthelmintic, diuretic, antisyphilitic.

Genus Gymnocladus (Kentucky Coffee Tree). G. Canadensis). Medical properties: Seeds and pods—emetic, nervine; leaves—cathartic.

Order Rosaceæ (Rose Family). 11 genera, 35 species.

Genus Prunus (Almond, Peach, Plum, etc.). P. Pennsylvanica (Wild Red Cherry); P. serotina (Wild Black C.); P. Virginiana (Choke C.). Medical properties: Bark—bitter, tonic, antiperiodic, astringent, expectorant, stimulant, nervine, sedative.

Genus Spiræa (Meadow Sweet). S. opulifolia (Nine Bark); S. tomentosa (Hardhack, Steeple Bush); S. lobata (Queen of the Prairie). Medical properties: Astringent, tonic.

Genus Gillenia (Indian physic). G. stipulacea (Bowman's Root, American Ipecac). Medical properties: Emetic, cathartis, sudorific, expectorant, tonic.

Genus Geum (Avens). G. vernum (Early Water A.); G. rivale (Water A., Purple A., Chocolate Root); G. strictum (Upright A., Field A., Herb Bennet); G. Virginianum (White A.). Medical properties: Astringent, tonic, sedative, antipyretic, stomachic. Sometimes used as a substitute for tea and coffee.

Genus Potentilla (Cinque-foil, Five-finger). P. Norvegica (Norway Cinque-foil); P. Canadensis (Five-finger); P. anserina (Silver Weed); P. Fructicosa (Shrubby Cinque-foil); P. palustris (Marsh Five-finger). Medical properties: Astringent, tonic.

Genus Fragaria (Strawberry). F. vesca (Common S.); F. Virginiana (Wild Strawberry). Medical properties: Fruit—antiscorbutic, refrigerant; leaves—astringent; both diuretic.

Genus Rubus (Bramble). *R. idæus* (Garden Raspberry); R. strigosus (Wild Red R.); R. occidentalis (Wild Black R., Thimbleberry, Black Cap); R. villosus, (High or Common Blackberry); R. Canadensis (Low B., Dewberry). Medical properties: Astringent, diuretic, laxative, antiscorbutic, refrigerant; bark of the root—antiemetic.

Genus Agrimonia (Agrimony). A. Eupatoria (Common A.); A. parviflora (Small-flowered A.). Medical properties: Mild astringent, stomachic.

Genus Rosa (Rose). R. Carolina (Swamp R.); R. lucida (Dwarf Wild R.); R. blanda (Early Wild R.). Medical properties: Astringent, tonic.

Genus Cratægus (Hawthorn, White Thorn). C. coccinea (Scarlet-fruited T.); C. tomentosa (Black or Pear T.); C. punctata (Red Haw); C. crus-galli (Cockspur T.). Medical properties: Astringent, tonic, expectorant. Bark, leaves and fruit used.

Genus Pyrus (Pear, Apple). P. coronaria (Crab Apple); P. arbutifolia (Chokeberry); P. Americana (American Mountain Ash). Medical properties: Astringent, tonic, detergent, antiscorbutic, esculent.

Order Saxifragaceæ (Saxifrage Family). 5 genera, 6 species:

Genus Ribes (Currant, Gooseberry). R. floridum (Wild Black Currant). Medical properties: Fruit—diuretic, diaphoretic, anti-scorbutic; bark—lithontryptic.

Genus Hydrangea. H. arborescens (Wild H., Seven-barks). Medical properties: Root—diuretic, lythontryptic; leaves—tonic, sialagogue, diuretic, cathartic.

Genus Parnassia (Grass of Parnassus). P. Caroliniana. Medical properties: Seed—diuretic, aperient, sedative (locally).

Genus Heuchera (Alum Root). H. Americana (Common A.). Medical properties: Root—powerfully astringent.

Genus Mitella (Mitre-wort, Bishop's-cap). M. nuda (Coolwort); M. dyphylla. Medical properties: Astringent, diuretic.

Order Hamamelaceæ (Witch Hazel Family). 2 genera, 2 species:

Genus Hamamelis (Witch Hazel). H. Virginiana. Medical properties: Bark and leaves—astringent, tonic, sedative, discutient.

Genus Liquidambar (Sweet Gum Tree, Bilsted). L. styraciflua. Medical properties: Bark—nervine; flowers—aromatic.

Order Halorageæ (Water Milfoil Family). 1 genus, 1 species:

Genus Hippuris (Mare's Tail). H. vulgaris. Medical properties: Diuretic, astringent.

Order Onagraceæ (Evening Primrose Family). 4 genera, 7 species:

Genus Circæa (Enchanter's Nightshade). C. lutetiana. Medical properties: Resolvent, vulnerary.

Genus Epilobium (Willow Herb). E. palustre; E. augustifolium (Fire-weed, Willow-herb); E. coloratum. Medical properties: Tonic, astringent, demulcent, emollient.

Genus Œnothera (Evening Primrose). Œ. biennis (Common Evening P.). Medical properties: Emollient, astringent.

Genus Ludwigia (False Loose Strife). L. alternifolia (Seed-box); L. palustris (Phthisic Weed, Water Purslane). Medical properties: Pectoral, expectorant. Used in asthma.

Order Lythraceæ (Loose Strife Family). 1 genus, 1 species:

Genus Lythrum (Loose Strife). L. alatum. Medical properties: Astringent, mucilaginous, antisyphilitic.

Order Cactaceæ (Cactus Family). 1 genus, 1 species:

Genus Opuntia (Prickly Pear, Indian Fig). O. vulgaris (Common Prickly Pear). Medical properties: Refrigerant.

Order Cucurbitaceæ (Gourd Family). 1 genus, 1 species:

Genus Sicyos (Star Cucumber). S. angulatus. Medical properties: Seed—diuretic, purgative.

Order Umbelliferæ (Parsley Family). 7 genera, 11 species:

Genus Archangelica. A. atropurpurea (Great Angelica, Purple A.); A. hirsuta. Medical properties: Root and seed—cathartic, stimulant, emmenagogue.

Genus Heracleum (Cow Parsnip). H. Lanatum. Medical properties: Stimulant, antispasmodic, carminative, narcotic.

Genus Pastinaca (Parsnip). *P. sativa* (Common Parsnip). Medical properties: Seed and tops—diuretic.

Genus Æthusa (Fool's Parsley). *Æ. cynapium.* Medical properties: Emetic, irritant; poisonous.

Genus Thaspium (Meadow parsnip). T. barbinode; T. aureum; T. trifoliatum; T. atropurpureum. Medical properties: Alterative, diaphoretic, antisyphilitic.

Genus Bupleurum (Thorough Wax). *B. rotundifolium.* Medical properties: Aromatic.

Genus Discoplura (Mock Bishop Weed). D. capillacea var. costata. Medical properties: Aromatic, pungent, tonic, diuretic, carminative.

Order Araliacæ (Ginseng Family). 1 genus, 4 species:

Genus Aralia. A. spinosa (Angelica Tree, Hercules' Club); A. racemosa (Spikenard); A. nudicaulis (Wild Sarsaparilla, American S.); A. quinquefolia (Ginseng). Medical properties: Aromatic, alterative, pectoral, diaphoretic, depurative, stimulant, balsamic, sialagogue, sudorific, emetic.

Genus Conium (Poison Hemlock). *C. Maculatum.* Medical propcrties: Narcotic, sedative, anodyne, anti-spasmodic, diuretic,deobstruent.

Order Cornaceæ (Dogwood Family). 2 genera, 7 species:

Genus Cornus (Cornel, Dogwood). C. Canadensis (Dwarf Cornel, Bunchberry); C. florida (Flowering Dogwood); C. sericea (Silky D., Kinnikinik); C. circinata (Round-leaved D., Green Osier); C. paniculata (Panicled Cornel, White Cornel); C. alternifolia (Alternate-leaved C.). Medical properties: Bitter, tonic, astringent, diaphoretic, antiperiodic.

Genus Nyssa (Tupelo, Pepperidge, Sour Gum). N. multiflora (Black Gum, Common T.). Medical properties: Acid, refrigerant.

Order Caprifoliaceæ (Honeysuckle Family). 6 genera, 13 species:

Genus Linnæa (Twin-flower). L. borealis. Medical properties: Bitter, subastringent, antirheumatic.

Genus Triosteum (Feverwort, Horse Gentian). T. perfoliatum; T. augustifolium. Medical properties: Emetic, tonic, diaphoretic, laxative.

Genus Symphoricarpus (Snowberry). S. racemosus (Snowberry); S. occidentalis (Wolfberry); S. vulgaris (Indian Currant). Medical properties: Root—Astringent, alterative, tonic.

Genus Diervilla (Bush Honeysuckle). D. trifida. Medical properties: Diuretic, astringent, alterative.

Genus Viburnum (Arrow Wood). V. lentago (Sheepberry); V. prunifolium (Black Haw, Sweet H.); V. dentatum (Arrow Wood); V. acerifolium (Dock Mackie); V. opulus (Cranberry Tree). Medical properties: Bark—diuretic, detergent, tonic, astringent, antiperiodic, antispasmodic, expectorant, alterative; bark of root of Black Haw—a valuable uterine sedative.

Genus Sambucus (Elder). S. Canadensis (Common Elder).

Medical properties: Bark—cathartic, emetic; flowers—diuretic, diaphoretic; exanthematous.

Order Rubiaceæ (Madder Family). 3 genera, 7 species:

Genus Galium (Bedstraw, Cleavers). G. asprellum (Rough Bedstraw); G. trifidum (Small B.); G. triflorum (Sweet-scented B.); G. aparine (Cleavers, Goosegrass); G. circæzans (Wild Liquorice). Medical properties: Diuretic, diaphoretic, demulcent, expectorant; herb of Goosegrass—aperient, refrigerant.

Genus Mitchella. M. repens (Partridge Berry). Medical properties; Diuretic, astringent, alterative, tonic, parturient.

Genus Cephalanthus. C. occidentalis (Button-bush). Medical properties: Tonic, laxative, diuretic, aperient, febrifuge.

Order Valerianaceæ (Valerian Family.) 1 genus, 2 species:

Genus Valeriana (Valerian). V. edulis (Oregon Tobacco); V. pauciflora (Wild Valerian). Medical properties: Aromatic, stimulant, tonic, anodyne, nervine, antispasmodic; the former, esculent.

Order Dipsaceæ (Teasel Family). 1 genus, 1 species:

Genus Dipsacus (Teasel). *D. sylvestris* (Wild T.). Medical properties: Root—diuretic, sudorific, stomachic.

Order Compositæ (Composite Family). 43 genera, 90 species:

Genus Cirsium (Thistle). *C. arvense* (Canada T.). Medical properties: Tonic, diuretic, hepatic, antibilious.

Genus Lappa (Burdock). *L. officinalis.* Medical properties: Root—alterative, diuretic, depurative; seed—diuretic, alterative.

Genus Centamæ (Star Thistle). *C. cyanus* (Bluebottle). Medical properties: Stomachic, tonic.

Genus Xanthium (Cocklebur, Clotbur). *X. strumarium* (Common C.); *X. spinosum* (Spiney C.) Medical properties: Same as Lappa officinalis.

Genus Ambrosia (Ragweed). A. trifida (Great Ragweed);

A. artemisæfolia (Romanweed, Hogweed, Bitterweed), Medical properties: Astringent, stimulant, detergent, antiseptic.

Genus Matricaria (Wild Chamomile). M. discorida. Medical properties: Tonic, stomachic, carminative.

Genus Tanacetum (Tansy). *T. Vulgare* (Common Tansy.) Medical properties: Aromatic, tonic, emmenagogue, diaphoretic.

Genus Artemisia (Wormwood). *A. absinthium* (Wormwood); *A. vulgaris* (Mugwort); A. ludoviciana (Western M.); A. biennis (Biennial Wormwood); A. abrotanum (Southernwood); A. Canadensis (Canada W.). Medical properties: Bitter, tonic, deobstruent, astringent, anthelmintic, diaphoretic.

Genus Erechthites (Fireweed). E. hieracifolia (F.) Medical properties: Emetic, tonic, astringent, alterative.

Genus Gnaphalium (Everlasting, Cudweed). G. polycephalum (Sweet-scented E.); G. uliginosum (Low Cudweed, Mouse Ear). Medical properties: Astringent, diaphoretic, pectoral, sudorific, stomachic, mucilaginous, diuretic; juice of former, anaphrodisiac.

Genus Antennaria (Everlasting Immortelle). A. dioricum (Life Everlasting); A. margaritæa (Pearl-flowered E.); A. plantaginifolia (Plantain-leaved E., White Plantain). Medical properties: Astringent, styptic, anodyne, vermifuge, pectoral, diuretic.

Genus Vernonia (Ironweed). V. Noveboracensis (Common Ironweed); V. fasciculata. Medical properties: Bitter, tonic, deobstruent, alterative, depurative.

Genus Liatris (Button Snakeroot, Blazing Star). L. squarrosa (Common Blazing S.); L. cylindracea; L. Scariosa (Rattlesnake's Master); L. spreata (Button Snakeroot). Medical properties: Diuretic, stimulant, tonic, diaphoretic, emmenagogue, alterative.

Genus Eupatorium (Thoroughwort, Boneset). E. purpu-

reum (Purple Bonset or Thoroughwort, Trumpet-weed, Joe-Pye weed, Queen-of-the-Meadow); E. Purfoliatum (Boneset, Thoroughwort); E. sessifolium (Upland Boneset); E. ageratoides (White Lanicle, White Snake-root); E. Aromaticum. Medical properties: Tonic, aromatic, bitter, astringent, diuretic, diaphoretic, antispasmodic, expectorant, aperient, emetic, antiperiodic.

Genus Kuhnia (False Boneset). K. Eupatorioides. Medical properties: Bitter, tonic, diaphoretic.

Genus Conoclinum (Mist Flower). C. coelestinum. Medical properties: Diaphoretic, antispasmodic, expectorant.

Genus Cacalia (Indian Plantain). C. suraveolus; C. reniformis (Great Indian Plantain); C. atriplicifolia (Pale Indian Plantain); C. tuberosa (Tuberous Indian P.). Medical properties: Emollient, pectoral, like Marsh Mallow.

Genus Tussilago (Colt's-foot). T. farfara. Medical properties: Demulcent, emollient, tonic, errhine, expectorant, pectoral.

Genus Senecio (Groundsel). S. aureus (Golden Ragwort, Squaw-weed); S. Colbatus (Butterweed). Medical properties: Astringent, tonic, diuretic, diaphoretic, emmenagogue, expectorant.

Genus Inula (Elecampane). *I. helenium.* Medical properties: Expectorant, emollient, tonic, diuretic, diaphoretic.

Genus Solidogo (Golden-rod). S. bicolor; S. virga-aurea; S. rigida; S. odora (Sweet Golden-rod); S. gigantia. Medical properties: Carminative, stimulant, diaphoretic, diuretic, astringent, styptic.

Genus Aster (Aster, Starwort). A. undulatus; A. cordifolius; A. aestivus (Sampson-Snakeroot); A. puniceus (Cohosh). Medical properties: Antispasmodic, alterative, antirheumatic, aromatic, tonic, nervine, diuretic.

Genus Erigeron (Fleabane). E. Canadense (Horse-weed),

Butterweed); E. bellidifolium (Robin's Plantain); E. Philadelphicum (Common Fleabane); E. annuum (Daisy F., Sweet Scabious); E. strigosum (Daisy Fleabane). Medical properties: Diuretic, astringent, tonic, styptic, diaphoretic, emmenagogue.

Genus Achillea (Yarrow, Sneezewort). *A. millefolium* (Common Yarrow, Milfoil). Medical properties: Astringent, alterative, diuretic, tonic.

Genus Maruta (Mayweed). *M. cotula* (Common Mayweed, Dog-fennel). Medical properties: Bitter, pungent, nervine.

Genus Chrysanthemum. *C. leucanthemum* (Whiteweed, Ox-Eye Daisy). Medical properties: Acrid, tonic, diuretic, antispasmodic; in large doses, emetic.

Genus Helenium (Sneeze-weed). H. autumnale. Medical properties: Tonic, diuretic, diaphoretic, errhine.

Genus Polymnia (Leaf-Cup). P. Canadensis (Leaf-Cup); P. uvedalia (Yellow Leaf-Cup, Bear's-foot). Medical properties: Tonic, antispasmodic.

Genus Silphium (Rosin Plant). S. laciniatum (Rosin-weed, Compass-plant); S. terebinthinaceum (Prairie Dock); S. perfoliatum (Cup-plant). Medical properties: Plant—emetic; root—diuretic, diaphoretic, stimulant, pectoral; gum—stimulant, antispasmodic, pectoral.

Genus Parthenium. P. integrifolium. Medical properties: Aromatic, bitter, stimulant, diuretic, nephritic, lithontryptic.

Genus Coreopsis (Tickseed). C. tripteri—the wildis tripteris (Tall Coreopsis); C. trichosperma (Tickseed, Sunflower). Medical properties: Alterative, expectorant.

Genus Bidens (Bur Marigold). B. frondosa (Common Beggar-ticks); B. connata (Swamp Beggar-ticks); B. beckii (Water Marigold); B. bipinnata (Spanish needles). Medical properties: Expectorant, emmenagogue.

Genus Krigia (Dwarf Dandelion). K. Virginica. Medical properties: Same as Dandelion.

Genus Helianthus (Sunflower). H. giganteus (Wild S.); *H. animus* (Common S.); H. divaricatus (Rough S.); *H. tuberosus* (Jerusalem Artichoke). Medical properties: Diuretic, expectorant, pectoral; the H. tuberosus is edible.

Genus Rudbeckia (Cone Flower). R. laciniata (Common Cone F.). Medical properties: Diuretic, tonic. Also called Thimbleweed.

Genus Echinacea (Hedge Hog, Cone-flower). E. purpurea. Medical properties: Antisyphilitic, depurative, alterative.

Genus Cichorium (Succory, Chickory). C. intybus (Common Chickory). Medical properties: Aperient, deobstruent. bitter.

Genus Hieracium (Hawkweed). H. Scabrum (Rough Hinacium). Medical properties: Bitter, tonic, astringent.

Genus Nabalus (Rattlesnake-root). N. albus (White Lettuce). Medical properties: Bitter, tonic; antivenomous.

Genus Taraxacum (Dandelion). T. Dens-leonis (Common Dandelion). Medical properties: Stomachic, tonic, diuretic, aperient, hepatic.

Genus Lactuca (Lettuce) L. Canadensis (Wild L.); L. sanguinea (Wood or Red L.). Medical properties: Narcotic, anodyne, hypnotic, diuretic, diaphoretic, sedative.

Genus Mulgedium (False or Blue Lettuce). M. acuminatum (Blue L.); M. floridanum (False L.). Medical properties: Leaves considered antivenomous.

Genus Sonchus (Low Thistle). *S. oleraceus* (Common Low Thistle). Medical properties: Bitter, diuretic.

Order Lobeliaceæ (Lobelia Family). 1 genus, 4 species:

Genus Lobelia. L. cardinalis (Cardinal Flower); L. syphilitica (Great Lobelia); L. spicata (Spiked L.); L. inflata (In-

dian Tobacco, Lobelia). Medical properties: Emetic, expectorant, diaphoretic, diuretic, nervine, antispasmodic, resolvent, anthelmintic, cathartic, antisyphilitic.

Order Campanulaceæ (Campanula Family). 1 genus, 1 species:

Genus Campanula (Bell-flower). C. rotundifolia (Harebell). Medical properties: Emetic, pectoral.

Order Ericaceæ (Heath Family). 7 genera, 11 species:

Genus Guylussacia (Huckleberry). G. resinosa (Common or Black H.). Medical properties: Diuretic, astringent.

Genus Vaccinium (Blueberry). V. macrocarpa (American Cranberry); V. arboreum (Farkleberry); V. Pennsylvanicum (Dwarf Blueberry). Medical properties: Astringent, acid, refrigerant, diuretic, antiscorbutic. Fruit esculent.

Genus Arctostaphylos (Bearberry). A. uva-ursi (Common Bearberry). Medical properties: Diuretic, astringent, tonic, nephritic.

Genus Gaultheria (Aromatic Wintergreen). G. procumbens (Creeping Wintergreen). Medical properties: Stimulant, aromatic, astringent, diuretic, emmenagogue.

Genus Azalea (False Honysuckle). A. nudiflora (Purple Azalea, Pinxter Flower). Medical properties: Astringent.

Genus Pyrola (Shin-leaf). P. rotundifolia (Round-leaved Pyrola); P. elliptica (Shin-leaf). Medical properties: Diuretic, tonic, astringent, antispasmodic.

Genus Chimaphila (Pipsissewa). C. umbellata (Pipsissewa, Prince's Pine). Medical properties: Diuretic, tonic, alterative, astringent, antisyphilitic.

Genus Monotropa (Pine sap). M. uniflora (Indian Pipe, Corpse-plant). Medical properties: Root—tonic, nervine, sedative, antispasmodic.

Order Aquafoliaceæ (Holly Family). 1 genus, 4 species:

Genus Ilex (Holly). I. opaca (American Holly); I. decidua; I. verticillata (Black Alder, Winterberry); I. glabra (Inkberry). Medical properties: Tonic, antiseptic, astringent, emetic.

Order Ebenaceæ (Ebony Family). 1 genus, 1 species:

Genus Diospyros (Date Plum, Persimmon). D. Virginiana (Common Persimmon). Medical properties: Astringent, antiperiodic.

Order Plantaginaceæ (Plantain Family). 1 genus, 4 species:

Genus Plantago (Plantain Ribgrass). P. major (Common Plantain, Waybread); P. cordata (Heart-leaved P.); *P. lanceolata* (Ribgrass, Snake P., English P.); P. Virginira (White P., Dwarf P.). Medical properties: Refrigerant, diuretic, astringent, anodyne, antiemetic, alterative, antisyphilitic.

Order Primulaceæ (Primrose Family). 4 genera, 4 species:

Genus Lysimachia (Loose-strife). L. quadrifolia (Yellow Balm, Crosswort). Medical properties, Astringent, stomachic, antiperiodic, expectorant.

Genus Anagallis (Pimpernel). *A. arvensis* (Poor-man's Weather-glass). Medical properties: Poison, nervine, expectorant, stimulant.

Genus Centunculus (Chaffweed). C. minismus (Bastard Pimpernel). Medical properties: Same as Anagallis.

Genus Samolus (Water Pimpernel, Brookweed). S. valeriandi (Water Pimpernel). Medical properties: Purgative.

Order Bignoniaceæ (Bignonia Family). 3 genera, 3 species:

Genus Tecoma (Trumpet Flower). T. radicans (Trumpet Creeper). Medical properties: Sudorific, antivenomous.

Genus Catalpa (Indian Bean). C. bignonioides (Common Catalpa). Medical properties: Antiasthmatic.

Order Orobranchaceæ (Broom Rape Family). 3 genera, 3 species:

Genus Epiphegus (Buch Drops, Cancer Root). E. Virginianum. Medical properties: Nauseant, bitter, astringent, depurative.

Genus Conopholis (Squaw Root, Cancer Root). C. Americana (Earth Club). Medical properties: Same as preceding genus.

Genus Aphyllon (Naked Broom Rape). A uniflorum (One-flowered Cancer Root). Medical properties: Same as preceding genus.

Order Scrophulariaceæ (Figwort Family). 8 genera, 16 species:

Genus Verbascum (Mullein). *V. thapsus* (Common Mullein); *V. blattaria* (Moth M.). Medical properties: Demulcent, diuretic, anodyne, antispasmodic, vulnerary; seed—narcotic, purgative.

Genus Veronica (Speedwell). V. Americana (American Brooklime); V. Virginica (Culver's Root or Physic, Leptandra); V. angallis (Water Speedwell); V. Scutellata (Marsh S.); V. peregrina (Purslane S., Neckweed). Medical properties: Antiscorbutic, diuretic, emmenagogue, hepatic, laxative, purgative, tonic, expectorant, alterative.

Genus Linaria (Toad Flax). L. Canadensis (Wild Toad Flax); L. vulgaris (Toad F., Butter and Eggs). Medical properties: Cathartic, diuretic, deobstruent.

Genus Gerardia. G. quercifolia (Smooth False Foxglove, Golden Oak); G. pedicularia (Bushy Gerardia). Medical properties: Sedative, diaphoretic, stimulant, antiseptic, febrifuge.

Genus Gratiola (Hedge Hyssop). G. Virginiana (Water Jessamine; G. Missouriana (?) Medical properties: Carminative (?), acrid, drastic, vermifuge, diuretic, narcotic.

Genus Scrophularia (Figwort). S. nodosa (Healall). Medical properties: Vulnerary, depurative, emmenagogue.

Genus Chelone (Turtle-head, Snake-head, Balmony). C. glabra. Medical properties: Leaves—bitter, tonic, cathartic, anthelmintic, hepatic.

Genus Pedicularis (Lousewort). Canadensis (Wood Betony, Common Pedicularis). Medical properties: Tonic, sedative, astringent.

Order Verbeniceæ (Vervian Family). 1 genus, 4 species.

Genus Verbena (Vervian). V. hastata (Blue Vervian); V. urticifolia (Nettle-leaved or white V.); *V. officinalis* (European V.); V. bractiosa. Medical properties: Emetic, tonic, expectorant, sudorific, rubefacient.

Order Labiate (Mint Family). 19 genera, 27 species:

Genus Tencrium (Germander). T. Canadense (American Germander). Medical properties: Stimulant, tonic, aromatic, bitter, antirheumatic.

Genus Mentha (Mint). M. viridis (Spearmint); *M. piperita* (Peppermint). Medical properties: Aromatic, stimulant, stomachic, carminative, antispasmodic, diuretic; oil, rubefacient.

Genus Lycopus (Water horehound). L. Virginicus (Bulgeweed); L. sinuatus (Paul's Betony, Bitter Bulgeweed); L. Europœus (Bitter Bulgeweed). Medical properties: Tonic, sedative, astringent, pectoral.

Genus Cunila (Ditany). C. Mariana (Common Ditany). Medical properties: Carminative, stimulant, antispasmodic, diaphoretic, tonic, nervine.

Genus Collinsonia (Horsebalm). C. Canadensis (Richweed, Stone-root). Medical properties: Diuretic, antispasmodic, expectorant.

Genus Hedeoma (Mock Pennyroyal). H. pulbyioides (American Pennyroyal). Medical properties: Stimulant diaphoretic, emmenagogue, carminative, sudorific.

Genus Salvia (Sage). S. lyrata (Cancerweed, Wild Sage,

Lyre-leaved S.). Medical properties: Powerfully astringent—used on warts, etc.

Genus Pycanthemum (Mountain Mint, Basil). P. incanum (Wild Basil); P. pilosum; P. linifolium. Medical properties: Tonic, stimulant, diaphoretic, antispasmodic, carminative, sedative.

Genus Satureia (Savoy) *S. hortensis* (Summer Savoy). Medical properties: Aromatic, stimulant, carminative, emmenagogue, aphrodisiac.

Genus Melissa (Balm, Bee-balm, Sweet Herb). *M. officinalis* (Common Balm). Medical properties: Aromatic, diaphoretic, sedative, emmenagogue.

Genus Monarda (Horse Mint, Balm). *M. fistulosa* (Wild Bergamot); M. punctala (Horse Mint). Medical properties: Aromatic, bitter, nervine, stomachic, deobstruent; stimulant, carminative, sudorific, diuretic, emmenagogue, antiemetic.

Genus Blephilia. *B. hirsuta* (Ohio Horse Mint). Medical properties: Aromatic, tonic, stimulant, carminative.

Genus Nepeta (Cat Mint). *N. cataria* (Catnip); *N. glechoma* (Ground Ivy.) Medical properties: Aromatic, carminative, diuretic, antispasmodic, anodyne, emmenagogue, deobstruent, tonic, stimulant.

Genus Physostegia (False Dragon Head). *P. Virginiana.* Medical properties: Aromatic, stimulant, sudorific, diaphoretic, tonic, cerebral sedative.

Genus Prunella. *P. vulgaris* (Self-heal, Heal-all). Medical properties: Astringent.

Genus Scutellana (Skull Cap). S. gabricula (American Skull-cap); S. Cateriflora (Blue Skull-cap). Medical properties: Bitter, antiperiodic, diuretic, tonic, nervine, antispasmodic.

Genus Marrubium (Horehound). *M. vulgare* (Common

H.) Medical properties: Bitter, aromatic, tonic, diaphoretic, expectorant, pectoral, emmenagogue.

Genus Leonurus (Mothroot). *L. cardiaca* (Lion's-tail, Throatwort). Medical properties: Bitter, nervine, emmenagogue.

Genus Stachys (Hedge Nettle). S. palustris (Clown-heal). Medical properties: Nauseant, expectorant, nervine, emmenagogue, vulnerary.

Order Borraginaceæ (Borage Family). 5 genera, 10 species:

Genus Mertensia (Lungwort). M. Virginica (Virginian or Smooth Lungwort). Medical properties: Demulcent, mucilaginous, pectoral.

Genus Onosmodium (False Gromwell). O. Carolinianum; O. Strigosum (Wild Job's-tear); O. Virginianum. Medical properties: Root and seed—diuretic, tonic, lithontryptic.

Genus Lithospermum (Gromwell). *L. arvense* (Corn Gromwell); *L. officinale* (Common G.) Medical properties: Diuretic, lithontryptic.

Genus Cynoglossum (Hound's Tongue). *C. officinale* (Common Hound's T.); C. Virginianum (Wild Comfrey); C. Morisoni (Beggar's Lice). Medical properties: Mucilaginous, tonic, diuretic, astringent, aromatic, anodyne, narcotic.

Genus Heliophytum (Sun-plant). *H. Indicum* (Indian Heliotrope). Medical properties: Bitter, antivenomous, vulnerary, exanthematous.

Order Hydrophyllaceæ (Water-Leaf Family). 1 genus, 1 species:

Genus Hydrophyllum (Water-leaf). H. Virginicum (Burr Flower). Medical properties: Diuretic, astringent.

Order Polemoniaceæ (Polemonium Family). 1 genus, 2 species:

Genus Polemonium (Greek Valerian, Jacob's Ladder). P.

cæruleum (Greek Valerian); P. reptans (American Greek V.) Medical properties: Astringent, vulnerary, alterative, diuretic, diaphoretic, pectoral, expectorant, antivenomous.

Order Convolvulaceæ (Convolvulus Family). 3 genera, 5 species:

Genus Ipomœa (Morning Glory). *I. nil* (Smaller Morning Glory); I. pandurata (Wild Potato Vine, Man of the Earth). Medical property: Cathartic.

Genus Calystigia (Bracted Bindweed). C. sepium (Hedge Bindweed). Medical properties: Diuretic, cathartic.

Genus Cuscuta (Dodder). C. chlorocarpa; C. glomerata (American Dodder). Medical properties: Bitter, tonic, astringent, antiperiodic.

Order Solanaceæ (Nightshade Family). 4 genera, 9 species:

Genus Solanum (Nightshade). S. Carolinense (Horse-nettle); *S. nigrum* (Black or Common Nightshade); *S. Dulcamara* (Bitter Sweet). Medical properties: Narcotic, anodyne, depurative, deobstruent, diaphoretic, discutient; poisonous.

Genus Physalis (Ground Cherry). P. Pennsylvanica; P. pubescens (Common Ground C.); P. viscosa. Medical properties: Diuretic, sedative.

Genus Datura (Thorn-Apple). *D. stramonium* (Stramonium, Jimson or Jamestown Weed); D. tatula. Medical properties: Stimulant, sedative, narcotic, diuretic, diaphoretic, poisonous.

Genus Lycium. *L. vulgare* (Matrimony vine). Medical properties: Astringent, sedative in erysipelas locally.

Order Gentianaceæ (Gentian Family). 5 genera, 11 species:

Genus Sabbatia. S. angularis (American Centaury). Medical properties: Bitter, tonic, hepatic, vermifuge, emmenagogue, febrifuge.

Genus Erythræa (Centaury). E. centaurium (Common European Centaury). Medical properties: Aromatic, bitter, tonic, febrifuge,

Genus Frasera (American Columbo). F. Carolinensis. Medical properties: Bitter, tonic, antiseptic, febrifuge.

Genus Gentiana (Gentian). G. quinqueflora (Five-flowered Gentian); G. crinata (Fringed G.); G. ochrolenca (Sampson Snakeroot, Yellowish White G.); G. Alba (Whitish G.); G. Andrewsii (Closed G.); G. saponaria (Soapwort G.); G. puberula. Medical properties: Bitter, stomachic, tonic, astringent, anthelmintic, cholagogue, febrifuge.

Genus Menyanthes (Buckbean). M. trifoliata. Medical properties: Bitter, tonic, diuretic, emetic, cathartic, anthelmintic.

Order Loganaceæ (Logania Family). 1 genus, 1 species:

Genus Spigelia (Pink-root, Worm-grass). S. Marilandica (Maryland Pink-root). Medical properties: Narcotic, anthelmintic.

Order Apocynaceæ (Dogbane Family). 2 genera, 3 species:

Genus Fœsterania. F. difformis. Medical properties: Astringent, for warts.

Genus Apocynum (Dogbane, Indian Hemp). A. androsæniifolium (Spreading Dogbane, Wandering Milkweed); A. cannabinum (Indian Hemp). Medical properties: Emetic, cathartic, diuretic, sudorific, expectorant, anthelmintic, sternutatory.

Order Asclepiadaceæ (Milkweed Family). 2 genera, 7 species:

Genus Asclepias Milkweed, Silkweed). A. tuberosa (Butterfly weed, Pleurisy-root); A. incarnata (Swamp Milkweed); A. cornuti (Common Milkweed); A. Sullivantii (Smooth M.); A. vertiallata (Whorled M.). Medical properties: Expecto-

rant, diuretic, diaphoretic, carminative, tonic, alterative, emetic, cathartic.

Genus Aceratis (Green Milkweed). A. longifolia; A. viridifolia. Medical properties: Carminative, tonic, diuretic, antispasmodic.

Order Oleaceæ (Olive Family). 1 genus, 3 species:

Genus Fraximus (Ash). F. Americana (White Ash); F. sambucifolia (Black or Water A.); F. quadrangulata (Blue A.). Medical properties: Bark—tonic, diuretic, cathartic, astringent, antiperiodic, discutient, exanthematous; seed—*antiadipose.*

Order Aristolochiaciæ (Birthwort Family). 2 genera, 3 species:

Genus Asarum (Wild Ginger, Asorabacca). A. Canadense (Snakeroot, Southern Wild Ginger). Medical properties: Aromatic, stimulant, diaphoretic, carminative, expectorant.

Genus Aristolochia (Birthwort). A. Serpentaria (Virginia Snakeroot); A. tomentosa. Medical properties: stimulant, tonic, diaphoretic, diuretic, anodyne, febrifuge, exanthematous.

Order Phytolaccaceæ (Pokeweed Family). 1 genus, 1 species:

Genus Phytolacca (Pokeweed). P. decandra (Common P., Scoke, Gayet). Medical properties: Alterative, resolvent, delegent, deobstruent, antisyphilitic, antiscorbutic.

Order Cheuopodiaceæ (Goose-foot Family). 3 genera, 6 species:

Genus Blitum (Blite). B. capitatum (Strawberry blite). Medical properties: laxative.

Genus Chenopodium (Pigweed, Goosefoot). *C. album* (White Goosefoot or Lambsquarter); C. botrys (Jerusalem Oak, Feather Geranium); *C. ambrosoides* (Mexican Tea); *C.*

anthelminticum (Wormseed). Medical properties: Antiscorbutic, vermifuge.

Genus Atriplex (Orache). A. potula. Medical properties: Cathartic, drastic.

Order Amarantaceæ (Amaranta Family). 1 genus, 2 species:

Genus Amaranthus (Amaranth). *A. hypochondriacus;* A. albus. Medical properties: Astringent, detergent, antiphlogistic, vulnerary.

Order Polygnaceæ (Buckwheat Family). 2 genera, 19 species:

Genus Polygonum. *P. Pusicaria* (Lady's-thumb); P. hydropiper (Common Smartweed, Water-pepper); P. acre (Water Smartweed); P. hydropiperoides (Wild Water-pepper); P. amypibium (Water Fersicaria); P. Virginianum; P. arifolium; P. articulatum (Jointweed); P. aviculare (Knotgrass, Goosegrass Doorweed); P. erectum. Medical properties: Astringent, aromatic, purgative, emetic, antiseptic, diuretic, aperient, diaphoretic, tonic, vulnerary.

Genus Rumex (Dock, Sorrel). R. Britanica (Pale Dock); *R. potientia; R. crespus* (Curled D.); *R. obtusifolius* (Bitter D.); *R. acetossella* (Field or Sheep Sorrel). Medical properties: Leaves—acid, refrigerant, diuretic, antiscorbutic, laxative; root—alterative, astringent, depurative, tonic, antiscorbutic.

Order Lauraceæ (Laurel Family). 2 genera, 2 species:

Genus Sassafras. S. officinalis. Medical properties: Bark—aromatic, stimulant, alterative, diuretic, diaphoretic; oil—rubefacient, antirheumatic, stimulant, antiseptic.

Genus Lindera (Wild Allspice, Firebush). L. benzoin (Spice-bush, Benjamin-bush). Medical properties: Aromatic, anthelmintic, antiperiodic, febrifuge; fruit—spicy.

Order Thymelsaceæ (Mezereum Family). 1 genus, 1 species:

Genus Dirca (Leather-wood, Mosswood). Medical properties: Bark—acrid, rubefacient, vesicant, sudorific, expectorant; twigs—poison.

Order Santalaceæ (Sandal-wood Family). 1 genus, 1 species:

Genus Comandra (Bastard Toad Flax). C. umbellata. Medical properties: Tonic, febrifuge.

Order Loranthaceæ (Mistletoe Family). 1 genus, 1 species:

Genus Phoradendron (False Mistletoe, American M.). P. flaviscens (American Mistletoe). Medical properties: uterine sedative, oxytocic; useful in menorrhagia, irritability of urethra, bladder, etc.; emmenagogue.

Order Sauraceæ (Lizzard's Tail Family). 1 genus, 1 species:

Genus Saururus (Lizzard's Tail). S. cerunus. Medical properties: Emollient, discutient; used for inflamed breasts.

Order Cerataphyllaceæ (Hornwort Family). 1 genus, 1 species:

Genus Ceratophyllum (Hornwort). C. demersum. Medical properties: Demulcent, emollient.

Order Callitrichaceæ (Water Starwort Family). 1 genus, 3 species:

Genus Callitriche (Water Starwort). C. verna; C. heterophylla; C. autumnalis. Medical properties: Diuretic, in dropsy.

Order Euphorbiaceæ (Spurge Family). 3 genera, 16 species:

Genus Euphorbia (Spurge). E. polygonifolia; E. geyeri; E. serpens; E. glyptosperma; E. maculata (Spotted Spurge); E. humistrata; E. hypericifolia (Large Spotted S.); E. corallata

(Blooming S.); *E. helioscopia* (Sun S., Churnstaff); *E. cyparissias* (Cypress S.); E. dentata; E. heterophylia; E. commuta; E. obsutata. Medical properties: Emetic, diaphoretic, expectorant, cathartic, antisyphilitic, astringent, caustic, tonic, narcotic; poisonous.

Genus Acalypha (Three-seeded Mercury). A. Virginiana (Mercury-weed). Medical properties: Expectorant, diuretic.

Genus Ricinus (Palma Christi, Castor-oil Plant); *R. communis.* Medical properties: Laxative, cathartic, emollient.

Order Urticaceæ (Nettle Family). 8 genera, 11 species:

Genus Ulmus (Elm). U. fulva (Slippery Elm); U. Americana (American or White Elm); U. lata (Winged Elm). Medical properties: Astringent, tonic, alterative, diuretic, expectorant; mucilaginous, demulcent, emollient.

Genus Celtis (Hackberry, Nettle-tree). C. occidentalis (Sugar-berry, American Hackberry). Medical properties: Astringent, anodyne, refrigerant.

Genus Morus (Mulberry). M. rubra; M. alba (White Mulberry). Medical properties: Laxative, refrigerant, vermifuge.

Genus Urtica (Nettle). U. dioica (Common Stinging Nettle). Medical properties: Tonic, astringent, diuretic, pectoral.

Genus Pilea (Richweed, Clearweed, Coolweed). P. punula. Medical properties: Astringent, tonic, diuretic.

Genus Parietaria (Pellitory). P. Pennsylvanica (American Pellitory). Medical properties: Diuretic, deobstruent, emmenagogue.

Genus Cannabis (Hemp). *C. sativa* (Common Hemp). Medical properties: Nervine, anodyne, sudorific, antispasmodic.

Genus Humulus (Hops). H. lupulus (Common Hops). Medical properties: Bitter, nervine, tonic, anodyne, hypnotic, diuretic, febrifuge.

Order Platanaceæ (Plane-tree Family). 1 genus, 1 species.

Genus Platanus (Plane-tree). P. occidentalis (American Plane-tree, Sycamore, Buttonwood). Medical properties: Bark—antiscorbutic.

Order Juglandaceæ (Walnut Family). 2 genera, 9 species:

Genus Juglans (Walnut). J. cinerea (Butternut, White Walnut); J. nigra (Black W.). Medical properties: Bark—cathartic, alterative, tonic, anthelmintic, cholagogue, astringent.

Genus Carya (Hickory). C. olivæformis (Pecan); C. alba (Shell-bark or Stag-bark Hickory); C. sulcata (Western Shell-bark); C. tomentosa (Mocku-nut, White-heart Hickory); C. microcarpa (Small Fruited H.); C. porcina (Pig-nut or Brown H.); C. amara (Bitter-nut or Swamp H.). Medical properties: Shell of nut—astringent; Bark—cathartic.

Order Cupulifereæ (Oak Family). 5 genera, 13 species:

Genus Quercus (Oak). Q. alba (White O.); Q. obtusiloba (Post O.); Q. prinus (Swamp Chestnut O,); Q. monticola (Rock Chestnut O.); Q. imbricaria (Laurel or Shingle O.); Q. falcata (Spanish O.); Q. tinctoria (Black O.). Medical properties: Astringent, tonic, antiseptic, bitter, febrifuge.

Genus Castanea (Chestnut). C. Americana (American Chestnut); C. ferruginea (American Beech). Medical properties: Astringent, tonic, febrifuge.

Genus Conylus (Hazel). C. Americana (American Hazel-nut or Filbert); C. rostrata (Beaked Hazel). Medical properties: Anthelmintic, diuretic, anodyne.

Genus Ostrya (Hop-Horn Beam, Ironwood). O. Virginica (American Hop-Horn B., etc.). Medical properties: Alterative, tonic, antiperiodic.

Genus Carpinus (Horn Beam, Ironwood). C. Americana

(American Horn Beam, Blue or Water Beech). Medical properties: Same as preceding.

Order Myricaceæ. 1 genus, 1 species:

Genus Comptonia (Solander, Sweet Fern). C. asplenifolia. Medical properties: Astringent, diuretic, tonic, diaphoretic, expectorant, sedative, febrifuge.

Order Betulaceæ (Birch Family). 2 genera, 5 species:

Genus Betula (Birch). B. lenta (Sweet, Black or Cherry Birch); B. alba, var. populifolia (American White B.); B. papyracea (Paper or Canoe B.); B. nigra (River or Red B.). Medical properties: Astringent, bitter, aromatic, excitant, diaphoretic, stimulant; juice—anthelmintic, antiscorbutic; fragrant oil.

Genus Alnus. A. gerrulata (American Tag Alder). Medical properties: Alterative, emetic, astringent.

Order Salicaceæ (Willow Family). 2 genera, 11 species:

Genus Salix (Willow). S. humilis (Prairie Willow); S. cordata (Heart-leaved W.); S. nigra (Black W.); S. eriocephala; *S. fragilis* (Brittle W.); *S. alba* (White W.); *S. Babylonica* (Weeping W.). Medical properties: Bitter, astringent, tonic, antiseptic, deturgent, antiperiodic, antirheumatic.

Genus Populus (Poplar, Aspen). P. tremuloides (American Aspen); P. angulata; P. grandidurtata (Large-toothed A.); P. balsamifera, var. candicans (Balm of Gilead). Medical properties: Stimulant, tonic, diuretic, antiscorbutic, stomachic, antiperiodic, febrifuge.

Order Coniferæ (Pine Family). 7 genera, 9 species:

Genus Pinus (Pine). P. strobus (White Pine). Medical properties: Gum—pectoral, aromatic, bitter, astringent.

Genus Larix (Larch). L. Americana (American Larch or Tamarack). M edical properties: Laxative, tonic, diuretic, alterative.

Genus Taxodium (Bald Cypress). T. distichum (Southern Cyprus). Medical properties: Diuretic, carminative, vulnerary.

Genus Cupressus (Cypress). C. thyoides (White Cedar). Medical properties: Leaves—stimulant, aromatic, diaphoretic, stomachic.

Genus Thuja (Arbor Vitæ). T. occidentalis (American Arbor Vitæ, White Cedar of the North). Medical properties: Stimulant, diaphoretic, anthelmintic, antispasmodic, febrifuge.

Genus Juniperus (Juniper). J. Sabina (Savin); J. Virginiana (Red Cedar); J. Communis (Common Juniper), Medical properties: Bark and leaves—aromatic, stimulant, diuretic, emmenagogue, diaphoretic.

Genus Taxus (Yew). T. baccata, var. Canadensis (American Yew, Ground Hemlock, Dwarf Yew). Medical properties: Nervous sedative.

Order Araceæ (Arum Family). 5 genera, 6 species:

Genus Arisæma or Arum (Indian Turnip). A. tryphyllum (Indian Turnip); A. dracontium (Green Dragon, Dragon-root). Medical properties: Stimulant, expectorant, carminative, diaphoretic.

Genus Peltandra (Arrow Arum). P. Virginica. Medical properties: Stimulant, irritant.

Genus Calla (Water Arum). C. palustris (Wild Water Arum). Medical properties: Root—mucilaginous, stimulant, caustic (?.)

Genus Symplocarpus (Skunk Cabbage). S. fœtidus. Medical properties: Root—expectorant, sudorific, antispasmodic; Fruit and seed—pectoral.

Genus Acorns (Calamus). A. calamus (Sweet Flag). Medical properties: Root—aromatic, carminative, tonic, vulnerary.

Order Typhaceæ (Cat-tail Family). 2 genera, 2 species:

Genus Typha (Cat-tail Flag). T. latifolia (Common Cat-tail or Reed-mace). Medical properties: Root—astringent, emollient, detergent.

Genus Sparganium (Bur-reed). *S. ramosum* or racemosum. Medical properties: Emollient, mildly astringent.

Order Alismaceæ (Water Plantain Family). 2 genera, 2 species:

Genus Alisma (Water Plantain). A. plantago, var. Americana. Medical properties: Leaves—vesicant, diuretic, lithontryptic.

Genus Sagittaria (Arrow Head). S. variabilis (Arrow-weed). Medical properties: Farinaceous, lactagogue.

Order Hydrocharidaceæ (Frog's-bit Family). 1 genus, 1 species:

Genus Valisneria (Eelgrass). V. spiralis (Tape-grass). Medical properties: Plant—refrigerant, demulcent.

Order Orchidaceæ (Orchis Family). 5 genera, 11 species.

Genus Goodyera (Rattlesnake Plantain). G. repens (Net-leaf Plantain); G. pubescens (Adder's-violet). Medical properties: Demulcent, antiscrofulous.

Genus Arethusa. A. bolbosa. Medical properties: Emollient, anodyne.

Genus Corallorhiza (Coral Root). C. multiflora; C. odontorhiza (Crawley-root); Medical properties: Root—diuretic, sudorific, sedative, diaphoretic, febrifuge.

Genus Aplectrum (Putty-root, Adam and Eve). A. hyemale. Medical properties: Root—mucilaginous, pectoral.

Genus Cypripedium (Lady's Slipper, Moccasin Flower). C. arietinum (Ram's-head); C. candidum (Small White Lady's S.); C. parviflorum (Smaller Yellow Lady's S.); C. pubescens (Larger Yellow Lady's S.); C. spectabile (Showy Lady's S.).

Medical properties: Root—tonic, stimulant, diaphoretic, nervine antispasmodic, narcotic, hypnotic.

Order Bromelliaceæ (Pineapple Family). 1 genus, 1 species.

Genus Tillandsia. T. usneoides (Long Moss, Black Moss, Spanish M.). Medical properties: Powder—astringent, in lard for piles.

Order Amaryllidaceæ (Amaryllis Family). 2 genera, 2 species:

Genus Agave (American Aloe). A. Virginica (False Aloe). Medical properties: Root—bitter, carminative.

Genus Hypoxis (Star-grass). H. erecta. Medical properties: Root—detergent, vulnerary, antiperiodic.

Order Hærnodoraceæ (Bloodwort Family). 1 genus, 1 species:

Genus Aleteis (Colic-root, Star-grass). A. forniosa (Unicorn-root). Medical properties: Bitter, tonic, stomachic, uterine sedative.

Order Iridaceæ (Iris Family). 2 genera, 2 species:

Genus Iris (Flower-de-luce). I. versicolor (Larger Blue Flag). Medical properties: Root—alterative, resolvent, sialagogue, laxative, diuretic, antisyphilitic, vermifuge.

Genus Sisyrinchium (Blue-eyed Grass). S. Bermudiana. Medical properties: Root—acrid, cathartic.

Order Dioscoreaceæ Yam Family). 1 genus, 1 species:

Genus Dioscorea. D. villosa (Wild Yam Root). Medical properties: Antispasmodic, diaphoretic; used in bilious and female diseases.

Order Smiliaceæ (Smilax Family). 1 genus, 4 species:

Genus Smilax (Green-brier, Cat-brier, China-brier). S. rotundifolia (Common Green-brier); S. glauca (American Smilax); S. tamnoides (American China-root); S. herbacea (Carrion Flower). Medical properties: Root—depurative, alterative, diuretic, emmenagogue.

Order Liliaceæ (Lily Family). 11 genera, 17 species:

Genus Trillium (Three-leaved Nightshade, Wake-Robin, Birthroot). T. sessile; T. grandiflorum (Large White Trillium); T. erectum (Purple Trillium); T. nivale (Dwarf White T). Medical properties: Root—astringent, tonic, antiseptic, expectorant, diaphoretic, alterative, emmenagogue.

Genus Chamælirium (Devil's Bit.) C. luteum (False Unicorn Root, Blazing Star). Medical properties: Root—alterative, tonic, diuretic, emmenagogue, vermifuge.

Genus Uvularia (Bellwort). U. grandiflora; U. perfoliata. Medical properties: Tonic, demulcent, nervine.

Genus Melanthium (Bunch Flower). M. Virginicum. Medical properties: Insecticide—a sure remedy for itch; antiseptic (?).

Genus Smilacina (False Solomon's Seal). S. racemosa (False Spikenard). Medical properties: Alterative, diuretic, diaphoretic, depurative.

Genus Polygonatium (Solomon's Seal). P. biflorum (Smaller Solomon's Seal); P. gigantum (Great Solomon's Seal). Medical properties: Root—stimulant, cephalic, expectorant, mucilaginous, tonic.

Genus Asparagus. *A. officinalis* (Common Asparagus). Medical properties: Young shoots—diuretic, aperient, deobstruent.

Genus Lilium (Lily). L. Canadense (Wild Yellow Lily). Medical properties: Root—cathartic; maturating, *i. e.*, favoring the formation of pus.

Genus Erythronium (Dog's-tooth Violet). E. Americanum (Yellow Dog's-tooth, Adder's Tongue). Medical properties; Emetic, emollient.

Genus Scilla (Squill). S. Fraseri (Eastern Quamash, Wild Hyacinth). Medical properties: Emollient to inflamed breasts

Genus Allium (Onion, Garlic). A. tricoceum (Wild Leek); A. cernum (Wild Onion); A. Canadense (Wild Garlic). Medical properties: Bulb—Stimulant, diuretic, expectorant, diaphoretic, anthelmintic, emollient; plant—diuretic, stimulant, emollient.

Order Juncaceæ (Rush Family). 1 genus, 2 species:

Genus Juncus (Rush, Bog-rush). J. bufonius (Toad-grass); J. effusus (Bulrush). Medical properties: Plant—cathartic, diuretic.

Order Pontederiaceæ (Pickerel-weed Family). 1 genus, 1 species:

Genus Pontideria (Pickerel-weed). P. cordata. Medical properties: Emollient, astringent.

Order Commelynaceæ (Spiderwort Family). 1 genus 1 species:

Genus Tradescantia (Spiderwort). T. Virginica (Common Spiderwort). Medical properties: Root—demulcent.

Order Xyridaceæ (Yellow-eyed Grass Family) 1 genus, 1 pecies:

Genus Xyris (Yellow-eyed Grass). X. flexuosa. Medical properties: Alterative—in cutaneous diseases.

Order Cyperaceæ (Sedge Family). 1 genus, 1 species:

Genus Eleocharis (Spike Rush). E. polustris. Medical property: Astringent.

Order Gramineæ (Grass Family). 3 genera, 3 species:

Genus Bromus (Brome-grass). B. cilitus. Medical properties: Emetic, anthelmintic, cathartic, diuretic.

Genus Triticum (Wheat). T. repens (Couch, Quitch or Quick Grass). Medical properties: Root—diuretic, aperient.

Genus Phalaris (Canary Seed, Canary Grass). P. canariense. Medical property: Seed—diuretic.

Order Equisetaceæ (Horsetail Family). 1 genus, 4 species:

Genus Equisetum (Horsetail, Scouring Rush). E. arvense (Common Horsetail); E. lævigatum; E. robustum; E. hyemale (Scouring Rush, Shave-grass). Medical properties: Plant—diuretic, astringent.

Order Filices (Fern Family). 7 genera, 12 species:

Genus Polypodium (Polypody). P. incanum (Rock-brake). Medical properties: Root—demulcent, cathartic, anthelmintic.

Genus Adiantum (Maiden Hair). A. pedatum. Medical properties: Plant—pectoral, mucilaginous, expectorant, refrigerant, tonic.

Genus Pteris (Brake). P. aquilina (Common Brake). Medical properties: Root—anthelmintic, in tape worm.

Genus Asplenium (Spleenwort). A. augustifolium; A. trichomanes; A. filix fœmina (Lady Fern). Medical properties: Anthelmintic, astringent.

Genus Aspidium (Shield Fern, Wood F.). A. spinulosum; A. goldianum; A. marginale. Medical property: Anthelmintic.

Genus Osmunda (Flowering Fern). O. regalis (Flowering Fern); O. cinnamomea (Cinnamon Fern). Medical properties: Root—tonic, astringent, mucilaginous, styptic, uterine sedative.

Genus Ophioglossum, O. vulgatum (Adder's-tongue Fern). Medical property: Vulnerary—used in ointments.

Order Lycopodiaceæ (Club-Moss Family). 1 genus, 2 species:

Genus Lycopodium (Club Moss). L. selago (Fir Club Moss); L. lucidulum (Moon-fruit Pine). Medical properties: Emetic, purgative, abortive.

This list comprises about 670 species, or more than one-third of all the plants in the State. There is scarcely a region where there are not plants whose united properties would be sufficient

to battle successfully against any ordinary form of disease. We know too little of vegetable materia medica. It is not necessary that search be made for new species, but it is important that we have more definite information concerning the properties of the plants we already know.

Our medical colleges ought to introduce the study of medical botany into their courses of study, even if not more than a dozen lectures were given to it in the term. That would be a beginning, and would lead to closer study and much more perfect knowledge in this important department of a medical education. There is a great tendency at the present time to leave old remedies and prescribe new. It would be better if the old should be more carefully examined and their therapeutic value more accurately determined, that we might rest upon the experience of the past strengthened by that of the present.

With such a list of plants as the physician in Illinois has to select from, there is abundant opportunity to test the principles laid down in the beginning of this article, and to make more exact classifications of our vegetable remedial agents. Not only so, but a broad field is open for the investigation of particular species, in order that we may learn precisely what to expect from a given remedy when it is prescribed at the bedside.

EDITORIAL.

THE SAMUEL D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

We call attention to the appeal, in another column, to secure in some medical school the endowment of a *memorial professorship*, to be designated the "S. D. Gross Professorship of Pathological Anatomy."

Extended comment upon this subject is rendered unnecessary by the nature of the case. The gifted editor of *The American Journal of the Medical Sciences*, in the July number, current year, of that journal, has well said in the closing lines of his eloquent memoir upon "The Nestor of American Surgery":—

"In the death of Dr. Gross we have lost one of the brightest examples of the skill and learning, the conscientiousness and assiduity, the patience and perseverance, the dignity and morality by which our profession is truly ennobled. He has left us as a heritage a world-wide reputation which, as we regard it with conscious pride, cannot but stimulate us to a higher sense of duty to our profession and to our fellows."

The endowment of a *memorial professorship* is a peculiarly fitting and graceful recognition of one of the crowning glories of Professor Gross's life. He was, in the widest sense of the term, a great teacher. Entirely apart from his brilliant career as Professor of Surgery, his heroic and herculean efforts to

elevate the standard of American Medical Education are fresh in all our memories. Great wisdom has been evinced in the selection of Pathological Anatomy as the subject of the *memorial professorship*. Professor Gross's pioneer researches in this field,—of whose topography, American and English surgeons, even at the present day, are only too ignorant,—are integral portions of the history of American Medicine and Surgery.

The medical school, in which the endowment shall be secured, is not mentioned in the appeal. We trust, however, the Jefferson Medical College will be chosen. For twenty-eight years the welfare of this institution was among the most ardently cherished purposes of the great surgeon's life.

The jealous guarding of the *esprit de corps* of his own profession, the deep interest in the struggles and success of young men, the wide and generous hospitality of his house were characteristics, which endeared Professor Gross to the members of the medical profession, and rendered his name a household word. A touching instance of his cavalier-like disposition occurred a few months before his death. In November of last year, the medical profession was suddenly called to mourn the loss of that great and good man, J. Marion Sims. Professor Gross, in a letter appearing in the columns of the *New York Medical Record*, was *first* to suggest and *first* to contribute to the "Sims Memorial Fund."

On the ninth of June, a meeting of the medical profession of Philadelphia was called to take action upon the death of its illustrious member. At this meeting,—a thoroughly representative one,—a committee was appointed to issue the appeal, which appears in our columns. The names of the distinguished gentlemen,—composing this committee,—constitute an adequate guaranty of the purity of their motives. The Provost of the University of Pennsylvania and the Dean of the Fac-

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ulty of the Jefferson Medical College are endeavoring to secure a common end.

Surely, under conditions like these, it is time to lay aside all petty party malice, spite and jealousy!

While the American medical mind is thus strongly moved by feelings of sorrow for its departed chieftain, opposition to the general will seems to be in peculiarly bad taste.

In the editorial columns of the *New York Medical Record*, 19th July, appears an acrimonious criticism of the proposed *memorial professorship*, in which desire to perpetuate the fame of Professor Gross, but unwillingness to contribute to the resources of "a private medical college," is expressed.

We are not at all surprised at this action of the *New York Medical Record*. It is merely a local expression of that thoroughly commercial spirit which has actuated this Journal to preserve silence upon the subject of higher medical education, and has instigated the support of the doctrine that medical gentlemen ought to meet in consultation with men whom they believe to be knaves or fools.

A profound student of medicine, in an essay, "Of Nature in Men," once said:—

"Nature is often hidden, sometimes overcome, seldom extinguished."

We are surprised, however, at the cool effrontery of *The Record*, when it ascribes a similarly sordid mode of thought and action to "many, perhaps most physicians." The cheerful alacrity, with which physicians, generally, and the eminent members of the profession in New York city, particularly, have responded and are responding, is a sufficient refutation of this remarkable assertion.

As the school in which the Chair shall be endowed has not been named, as yet, *The Record's* ill-natured remark is purely

a work of supererogation. But the allusion to the Jefferson Medical College as "a private medical school" is untruthful. *The Record's* idea of American Medical Schools seems to be based upon the conception which is current among certain members of the profession in New York city. "What is an American Medical College?" asked a celebrated New York gynæcologist, very recently. "An association of doctors, who want to make a little money." If we were to judge from the attitude of *The Record* upon this and kindred subjects, and if we were to admit that *The Record* is, in any degree, exponential of the views of the local profession, we would be compelled to believe that the distinguished ex-professor's *dictum* expresses a grave truth, so far as the New York Medical Schools are concerned.

SHALL MEDICAL OFFICERS OF THE ARMY ENGAGE IN PRIVATE PRACTICE?

Again the hue and cry against officers in the army engaging in private practice is heard. *The Medical Record*, of 19th July, publishes a letter, by Dr. John G. Stanton, of New London, Conn., in which a vehement protest against this time-honored privilege is made. *Caduceus*, in *The Record*, of 19th August, ably defends the existing custom. We call attention to a vigorous letter, by a distinguished and experienced army surgeon, which appears in our columns.

The subject is worthy of consideration, since the hostility of the members of the profession in Washington to gentlemen of the Army, Navy and Marine Hospital Service, practicing in that community, is well known, and has instigated more than one abortive effort at legislative interference with the privileges of the class. Such enmity is an opprobrium to the profession. The examinations for admission into the medical corps of the

army and navy are searching, thorough, rigorous, and *strictly impartial.* The Marine Hospital Service claims identity of conditions in these respects. The services are accordingly constituted of truly representative men. This fact is well recognized by the general profession, and a commission in any one of the services is properly regarded as the highest qualifying document attainable by a medical man in America. The same fact has met with abundant recognition among the laity. It is generally conceded that the Engineer and Medical Corps are the best manned organized divisions of the army. The position of the Navy Medical Corps, at the head of the Staff, has been equally well sustained. Very recently, and as the resultant of strenuous efforts, the Marine Hospital Service has achieved a similarly lofty eminence.

As scientific investigators, medical and surgical practitioners, gallant officers, and well-bred gentlemen, the medical officers of the Army, Navy and Marine Hospital Service reflect credit upon the American medical profession and have well earned the universal esteem in which they are held. The very least the profession can do is to leave the medical officers of the United States government in full possession of the limited privileges which they at present enjoy.

In the words of Dr. Heiskell:

"It may not be out of place incidentally to state that to prohibit a medical officer (when his public duties will permit) from extending relief to those of his fellow-citizens who may apply for his services—having confidence in his professional attainments—would be as ungracious to them as it would be devoid of the common dictates of humanity, and might afford as just and perhaps a better cause of complaint on the part of the neighboring community than the one alleged by yourselves, which relates exclusively to private interests."

CORRESPONDENCE.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

American surgery has had no better exponent than Samuel D. Gross; none so honored abroad and at home by institutes of learning; none more revered by his associates and his pupils. His long and brilliant professional career deserves the perpetuation of his name in close association with medical tuition.

In furtherance of this object, the Alumni Association of Jefferson Medical College has inaugurated a movement to secure, in some medical school, the endowment of a Memorial Professorship, to be designated The S. D. Gross Professorship of Pathological Anatomy.

The profession at large, the personal friends of the late Professor Gross, and others interested in elevating the standard of medical education, are cordially invited by the undersigned to participate in this graceful recognition of conduct and services which have largely helped to establish the high standard of excellence to which surgery has attained throughout the United States, and served so much to dignify the repute of American medicine.

Contributions may be sent to Dr. R. J. Dunglison, Treasurer, Lock Box 1274, Philadelphia P. O., and will be acknowledged in the columns of the *Medical News* of Philadelphia.

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SHALL ARMY MEDICAL OFFICERS ENGAGE IN PRIVATE PRACTICE?

Sir:—It is a principle that, in the laws governing a community, the rights and privileges of individuals should not be

restricted farther than is necessary to the common good of the whole. To curtail the rights of one class, in the interests of another class, not benefiting the whole, is arbitrary and tyrannical. To restrict the rights of one class of medical men, in the interests of another class, without thereby benefiting the public at large, is a case of this kind. When Dr. Stanton asks that the Army Surgeon at Fort Trumble be prohibited from engaging in civil practice, he asks it, not in the interests of the community, but in his own interest.

The public is not benefited thereby; on the contrary, they would be deprived of the right to call in the Army Surgeon in case they preferred his services to those of Dr. Stanton. The public have a right to select a physician from amongst all those competent and willing to serve it, and any law restricting its privilege in this particular would be an injury and not a benefit. They do not patronize the Army Surgeon for *his* benefit, but for their *own*. The advantage of having the advice of an Army Surgeon is in many parts of the country a very important one, and especially so at small towns and frontier stations, where the local medical talent is not infrequently of inferior quality. People everywhere are entitled to the best medical and surgical advice, which they can procure, and any law restraining them in their choice can only be regarded as an arbitrary injustice.

On the frontier, the Army Surgeon often affords the best, if not the only medical talent at hand, and if he were prohibited from rendering his services the people would be the greatest sufferers. Many instances in proof of this might be cited. If, in the eastern cities, the Army Surgeon who happens to be stationed there is called upon, it is because his services are required or preferred, and so long as he is competent and conducts himself according to the rules of medical practice, governing respectable physicians of the place, it is merely the

exercise of a right to which the public is entitled, the curtailing of which would be oppressive and wrong.

That these cities are over-crowded with *so-called* doctors, and that there exists among them a struggle for life, is no argument in favor of prohibiting a class of competent men from giving the benefit of their services to the public when called upon to do so. Instead of crying out in their own interest and to the detriment of the public for the summary suppression of the few who happen to be subject to military law, it would be far more manly to stand upon their own individual merits for success in the contest and trust to the survival of the fittest.

The number of army surgeons stationed at any one time in eastern cities is insignificantly small as compared with the number of civil practitioners, and ought not to be regarded with so much professional jealousy as to call for their extermination, which, if accomplished by military order, would give no perceptible relief to the pressure which exists there. Instead of attempting to inflict a useless and arbitrary wrong upon a class, already subjected to many hardships and poorly paid, it were far more sensible for the civil physicians to direct their energies against the real source of the difficulties of which they have to complain. It is not in efforts to deprive the public of the services of a few scattering individuals, well trained and competent to practice their profession, but by checking the flood of uneducated and unprepared incompetents, armed with diplomas and turned loose amongst them every year, that the evil is to be remedied. The State legislatures should be made to see the folly of chartering in every little town throughout the land, for the issuing of licenses to kill, so-called medical schools, with out any resources or appliances to teach, train or prepare their students to practice the profession into which they are admitted, with full powers and privileges, and, so far as the public can

discriminate, on a par with most of the best schools in the land. The man who has devoted his best energies without stint of time or means and acquired in the most favored institutions at home and abroad a liberal literary and medical education must take his place at the bedside with the ignorant clod-hopper whose preparation consists in his having spent a couple of winters, when there was nothing to do on the farm, in a room over a grocery store in some town listening to a few country doctors tell their experience!

They are both doctors, armed alike with diplomas and licenses to practice. The public can discriminate only in point of personal appearance and manners, but not as to professional attainments. Thus the country is over-crowded with incompetents. Doctoring has been reduced to a business, and the practitioner presents himself in whatever shape will bring him the most victims, whether as homœopath, alopath, eclectic, or a mixture of them all, and thus the people are imposed upon and the profession brought into distrust and disgrace. The remedy for all this is to induce state legislators to grant charters only to institutions properly provided with the means and appliances to teach the different branches of medicine and surgery as they should be taught to turn out competent practitioners. There will be numskulls enough even then; but the first step is to close the doors to the enormous abuses now practiced upon public confidence, guarding its interests by giving it better physicians, of which it stands in great need.

AN ARMY SURGEON.

Chicago, Ill., Aug. 20.

BOOK REVIEWS.

DIE DIPHTHERIE. *Ihre Entstehung, Verhüting Und Behandlung. Von Dr. Med.* C. G. ROTHE, *Altenburg. 12 mo., pp. viii., 92. Leipzig, Ambr. Abel, 1884.*

Dr. Rothe has been favorably known for a long time as a medical writer, journalist and translator. In this little book, the principal facts in connection with the ætiology, prophylaxis, and treatment of diphtheria are collected and woven into a monograph of a remarkable character. While concise, the author is never obscure or confused in the expression of ideas. We note with pleasure the complimentary allusions to the investigations of Professor H. C. Wood and Dr. H. F. Formad, of the Med. Dept., Univ. of Pa. We heartily commend Dr. Rothe's little work to the reading public. W. W. J.

THE THEORY AND PRACTICE OF MEDICINE. *By* FREDERICK T. ROBERTS, M. D., B. SC., F. R. C. P. *With Illustrations. Fifth American Edition. 8 vo., pp. xiii, 1008. Philadelphia:* P. BLAKISTON, SON & CO., *1884. Chicago:* W. T. KEENER.

Professor Alfred Stillé, M. D., of the Medical Department of the University of Pennsylvania, has for years recommended "Roberts' Practice" to the members of his classes as in all

respects the best *text-book* on the subject in the English language. A higher encomium, or more adequate guaranty of general excellence, could not be accorded a medical book. The fifth edition, materially modified by the discussions of the International Medical Congress in 1881, is an invaluable volume, which demands a prominent place in the library of every student and practitioner of medicine.

We note with pleasure the absence of the advertisement list usually found in American publications. W. W. J.

POST-NASAL CATARRH AND DISEASES OF THE NOSE CAUSING DEAFNESS. *By* EDWARD WOAKES, M. D., *Senior Aural Surgeon and Lecturer on Diseases of the Ear, London Hospital, etc. 12 mo., pp. xii, 221. Philadelphia:* P. BLAKISTON, SON & CO.; *Chicago:* W. T. KEENER. 1884.

This little work of 220 pages treats of catarrh in its various forms, and of the ordinary chronic affections of the pharynx. These diseases, of which so much has been said by the laity, have ordinarily been ignored by the regular physician as unworthy his care, and as a result they have constituted a field upon which charlatans have entered with the greatest assurance, and most disastrous results, so far as many of their victims were concerned.

Fortunately there are now many skilled specialists who devote their time to the care of the more intractable of these affections, and our author has placed the whole subject in a lucid manner before the profession at large.

The first impression of the general practitioner, on reading the book, would probably be that it unduly magnifies the importance of the specialist, by overrating the dangers of simple affections and dwelling upon the occult results which only the

laryngologist or aurist can properly treat. However, a more careful perusal will, we think, acquit the author of this charge; for it will be found that he has given specific directions for the earlier treatment of the various affections of this region, which any qualified physician may readily follow; and in pointing out the grave results which sometimes follow affections, so simple, even, as an ordinary cold, he has at the same time called attention to the prominent symptoms which indicate danger, and at the same time has done what we all demand of the specialist, *i. e.*, described the cause, effect, and the treatment of the obstinate cases, of simple diseases, and of their rare complications. Although not fully prepared to accept entirely the author's theories, we can heartily commend the book to all practitioners of medicine. E. F. I.

HOOPER'S PHYSICIAN'S VADE MECUM: *A Manual of the Principles and Practice of Physic; with an Outline of General Pathology, Therapeutics and Hygiene. Tenth Edition. Revised by* WILLIAM AUGUSTUS GUY, M. B. CANTAB, F. R. S., *and* JOHN HARLEY, M. D., *Lond.*, F. L. S. *Vol. I., 8 vo., pp., ix., 338. May Number, Wood's Library of Standard Medical Authors. New York:* WILLIAM WOOD & CO.; *Chicago:* W. T. KEENER. 1884.

We heartily agree with the *dictum* of the American publishers, that "One of the remarkable books in medicine is Hooper's 'Physician's Vade Mecum.'" It is a poor book of a very bad class of books. In one volume of three hundred and thirty-eight pages is contained an abstract of our knowledge of General Physiology, Pathology, Therapeutics, and General Diseases! Typographical errors are numerous and the illus-

trations are wretched. As if to atone for the general poverty of the book, the names of Doctors Guy and Harley appear as revisers on the title page. The gullibility of the American medical practitioner may be prodigious, but it has certain limits. We protest against the *foisting* of such books upon the medical public by publishers, who have won professional confidence by honorable means.

Hooper's "Physician's Vade Mecum" will find no place in a judiciously selected medical library. W. W. J.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY. *Regular Meeting, 19th May, 1884. The President,* Dr. D. A. K. STEELE *in the chair.*—MONOLOCULAR OVARIAN CYST, *exhibited by* PROFESSOR CHAS. T. PARKES, M. D.—UTERINE LEIO-MYOMATA, *exhibited by* PROFESSOR E. C. DUDLEY, M. D.—REPORT OF COMMITTEE ON STATE MEDICINE.

Professor Chas. T. Parkes, M. D. gave the clinical history of a monolocular ovarian cyst, weighing twenty-four pounds. The cyst was exhibited. The patient, nineteen years old, had noticed during the last three years a gradually increasing, abdominal, tumor. She had been treated by a number of physicians for dropsy. Three weeks ago, she came under Dr. Parkes's observation, and the diagnosis of monolocular cyst was made. The tumor increased in size until the abdominal circumference, measured around the umbilicus, was forty-four inches. She enjoyed excellent health, and experienced no especial inconvenience from the tumor.

Four days since, in one of the city hospitals, the cyst was removed.

An incision in the median line of the abdomen,—three and one-half inches in length,—was made, the cyst tapped, twenty-

three pounds of fluid removed, and the characteristic, broad pedicle ligatured.

There were no intestinal or omental adhesions. The sac of the cyst weighed one pound, and, when distended with air showed no corrugations. The hæmorrhage was trifling, and was controlled by ligatures. Since the operation, the patient's temperature has not risen above 99 1-5° F., and the pulse has not exceeded 100.

An uneventful convalescence is anticipated.

Professor E. C. Dudley, M. D. exhibited specimens of two leio-myomata, removed from the uterus by laparotomy. The following is the substance of his verbal report of the case, which presents few parallels in the history of laparotomy.

The patient was referred to Dr. Dudley by Professor R. N. Isham, M. D.

The patient, forty-eight years old, Norwegian, never married, never pregnant, cessation of menstrual epoch last fall; the tumor had developed in two years.

The patient was seen for the first time, by the operator, last January. The abdomen was enormously distended,—at least three times as large as in pregnancy at term,—by a solid mass, which on aspiration yielded negative results. On percussion, *tympanites*, in the right flank and upper epigastric region, was elicited, while flatness was found in the other abdominal regions.

The uterus had been displaced upwards so far as to destroy all outline of the vaginal portion of the cervix. With great difficulty, the *os externum* could be reached by the tip of the finger. It was in extreme ante-location on a level with the pelvic brim. The *corpus* could not be outlined. The posterior *cul de sac* was filled with a mass, which crowded it down to a

level with the perineum. The introduction of the sound was impossible. *Per rectum*, the mass appeared non-adherent. A sound in the bladder passed nearly to the umbilicus. The patient was greatly emaciated.

The operator's diagnosis, at this time, was solid tumor of the uterus, with such extensive attachments, that removal would be almost certainly fatal, and exploratory incision was not to be considered, because the extreme distension of the abdominal walls would have prevented closing the wound over the tumor. The operator's advice to the patient,—like that of a number of eminent surgeons, who had previously seen her,—was adverse to operation. The patient returned after a few weeks, extremely emaciated, suffering from dyspnœa, gastric disturbance, and begged for the operation, as a *dernier ressort.*

The treatment, immediately preparatory to the operation consisted of two Turkish baths, thorough antiseptic irrigation of the vagina, and moderate catharsis.

All furniture in the patient's room, and that immediately adjoining it,—not absolutely necessary,—was removed. Ceiling, walls and wood-work were antiseptically cleansed. The rooms were thoroughly fumigated with burning sulphur for twenty-four hours. The *mons veneris* was shaved; the abdomen and genital canal were thoroughly cleansed by repeated applications of corrosive sublimate.

The instruments were passed through the flame of a spirit lamp, wiped by means of a bit of cotton, with pure carbolic acid, and immersed in a dilute solution of corrosive sublimate, (1 : 4000). The ligatures,—silk,—were first boiled in 95 per cent. sol. of carbolic acid for ten minutes, then in a 5 per cent. sol. for half an hour. Equally scrupulous, detailed attention was given to the disinfection of the assistants. In short, the

conditions were as nearly as possible those of absolute antisepsis.

The operation was performed 17th March, 1884.

Etherization was effected by Dr. R. Tilley with Ormsby's inhaler.

The operator was assisted by Drs. R. N. Isham, C. Fenger, W. W. Jaggard, W. P. Verity, George Isham, and O. E. Larkin.

The abdominal incision was made from umbilicus nearly to the ensiform appendix; it was prolonged downwards about two inches to the bladder, which had been drawn out of place.

If the incision had been made in the usual manner, the bladder would have been penetrated,—as it was found universally adherent over the anterior surface of the tumor. The transverse colon, pushed by the tumor in its growth, was found firmly adherent for a distance of eight inches in the upper epigastric region. A bundle of vessels, one inch in diameter, penetrated the tumor, just below the adherent colon. A nearly spherical, solid tumor, fourteen inches in diameter, springing from the left posterior wall of the *corpus uteri*, developing between the folds of the broad ligament,—which enveloped not less than half of its surface on the left and posteriorly,—with its anterior and inferior surfaces covered by the adherent bladder, presented itself. The tumor was also extensively attached posteriorly to the peritoneal surfaces. To the right of the tumor, lay the intestines, unattached.

The removal of the tumor *seemed* impossible, retreat *was* impossible. The adhesions and attachments were broken up by tearing, dissection and enucleation. All bleeding vessels were so carefully ligatured, as soon as wounded, that when the tumor was lifted out, the abdominal cavity was dry. In dis-

secting off the attached bladder, the *urachus* was opened. This gave rise to a spirt of urine. The opening was secured by a ligature. The tumor was now freed from all except its uterine attachments, which embraced the entire left posterior portion of the *corpus*. Around this attachment,—too short to be designated as a pedicle,—was passed, four times, a solid, round, pure rubber cord, ¼ inch in diameter, and securely tied. Hemorrhage, which, during the long and tedious enucleation, had, at times, been severe, was now well controlled. The tumor was then cut away, by an incision about three inches on the distal side of the rubber ligature. This left a pedicle, composed of uterine tissue, five inches in diameter. Another tumor, filling the *pelvis minor*, of the size and shape of the fœtal skull, springing from the posterior wall of the uterus, by an attachment two inches in diameter, was ligatured and removed in the same way. These ligatures had been placed temporarily with the expectation of removing them and of substituting clamps and the extra-peritoneal treatment; but now, after nearly two hours of rapid operating,—in which the peritoneal surfaces were extensively injured,—the patient showed unmistakable signs of impending collapse. The danger of substituting the clamp for the temporary ligatures was too great, so the latter were made permanent, and the intra-peritoneal plan adopted. Perforated, soft rubber drainage tubes, two-thirds of an inch in diameter, were placed respectively in the anterior and posterior *cul de sac*. The abdominal incision,—which, during the operation, had been lengthened to eighteen inches,—was closed with silk sutures, and dressed antiseptically. Immediately after the operation, the patient's pulse was scarcely perceptible, but she rallied from shock with surprising rapidity. Temperature, during the first eight days, ranged from 98–101° F.; pulse, 100 to 120; respiration was accelerated to a correspond-

ing degree; flatus passed downwards on the second day. On the third day the drainage tubes were removed, no discharge having escaped through them. No unfavorable symptoms were observed until the ninth day, when the temperature, in the morning, rose to 102° F., in the evening, to 103° F.; pulse was correspondingly accelerated; during the eleventh and twelfth days, temperature reached 104–5° F., pulse and respiration keeping equal pace.

Professor C. Fenger, M. D. was summoned to a consultation. A rapidly increasing tumor, observed in the lower hypogastric region, rising out of the pelvis, of a non-fluctuating character, was thought to be pus confined within tense walls.

An abdominal incision was made and about one pint of thick, fœtid pus was discharged from a cavity, which nature had made by the agglutination of peritoneal surfaces around it.

This cavity was washed out and soft rubber drainage tubes re-introduced to the bottom of Douglas's *cul de sac*, which bounded the cavity inferiorly, where the end of the tube could be easily felt by the vaginal touch. The abscess cavity was frequently washed out with dilute solutions of carbolic acid.

For two days, temperature and pulse continued nearly normal; the temperature, finally, again rose to 104–5° F. Examination revealed no new accumulation of pus, and the rise in temperature being attributed to imperfect drainage, a counter-opening was made, between the *cul de sac* of Douglas and the vagina, about the twelfth day, and the drainage tube was passed downwards to the vulva. This opening was preceded by careful disinfection of vagina and vulva. An antiseptic dressing of cotton and iodoform was placed over the vulva.

From this time, temperature and pulse gave little anxiety. The patient rapidly improved. All bodily functions became

nearly normal. The patient's appetite was voracious. Surprising quantities of food were consumed. The cavity continued to discharge pus, and was washed out with greater or less frequency according to the temperature. On the twenty-seventh day, introducing the finger into the cavity through the abdominal wound, the lesser ligature was hooked out, together with some adherent silk thread. On the thirty-seventh day, the larger ligature, with a large sloughing mass, was, in the same way, removed. On the forty-first day, the drainage tube was drawn up into the cavity and the opening through the *cul de sac* closed spontaneously in a few days, so as to leave but one opening,—that is, through the lower angle of the abdominal incision.

Now, on the sixty-third day after the operation, the patient's convalescence may be regarded as secure. Pallor has left her face, she has greatly increased in flesh, sleeps perfectly, and, were it not for the slight drainage, would consider herself well.

The larger tumor, after the escape of much fluid, weighed thirty pounds; the smaller tumor weighed two pounds. Professor Lester Curtis, M. D., on microscopic examination, pronounced the tumors to be *leio-myomata.*

The case illustrated a few truths.

It establishes a wide latitude of possibilities for operation in the abdominal and pelvic cavities. It almost implies that we may be on the eve of operating in the most dangerous cases of uterine myomata quite as safely as in the more serious cases of ovarian cyst. The operator discussed at length the subjects of elastic and inelastic ligatures, intra and extra-peritoneal plans of treatment in laparo-myomotomy, and expressed the hope that future experience would establish the laws governing the intra-

peritoneal treatment of the pedicle upon as sound a basis as in the case of ovarian cysts. L. H. M.

REPORT OF COMMITTEE ON STATE MEDICINE.—*Mr. President and Gentlemen:*—Your committee has the honor to report as follows: It has taken into consideration as coming within the scope of the resolution under which it was appointed, the following subjects:

First: The question of confidential communications. Second: The state of the laws regulating the supply of anatomical material. Third: The laws regulating medical education. Fourth: The laws regulating the relations of the insane to the community. Fifth: The question of suppressing indecent quack advertisements. Sixth: The question of practicing under an alias.

I. There is no statute regulating the relations of physicians and patients, as regards confidential communications, and the committee would recommend that the Society use all its efforts to secure the passage of the act now in force in New York, which is as follows: "No practitioner of medicine, surgery or midwifery shall be permitted to disclose any information which may be obtained from patients for purposes of diagnosis, prognosis, or treatment."

II. In regard to the supply of anatomical material, the committee would recommend the act proposed by the Chicago Demonstrators' Association as being adapted to meet the emergency.

III. In regard to the question of medical education, the committee believes that no degree of Doctor of Medicine shall

be deemed valid, which has been conferred by any medical college on any one, who shall not have been previously examined as to his general education by a committee of the medical society of the school of practice, which said student proposes to follow; such committee to be chosen from members of the society not connected with any college; the certificate of the society to constitute evidence of such examination. The committee also believes that no medical college should hereafter be incorporated in this State, unless the same has an endowment fund of $150,000, free of all claim. The committee believes that no person should be hereafter permitted to enter upon the practice of medicine unless he shall have been previously examined by a board of examiners on Anatomy, Chemistry, Obstetrics and Gynæcology, Surgery, Practice of Medicine, Hygiene and State Medicine, Psychiatry, Therapeutics, Materia Medica and Pharmacy. This board of examiners should be chosen from the various schools of practice in proportion to the numbers of practitioners of each school. Five of these should be chosen by the various State medical societies, none of whom should in any way be connected with the medical colleges. The President and Secretary of the State Board of Health should be, *ex-officio*, members of this board. The surgeons of the *Army*, *Navy* and *Marine Hospital Service* should be exempted from the provisions of this act.

IV. The laws respecting the insane are in a very bad state and require revision in several particulars. By the present system of trying insanity—as if it were a crime—the insane are deprived of that early treatment which is their due, and family secrets become the property of the public. The judges often give local politicians the right to select private juries for the trial of friends who have become insane. A better law than the existing one would be one, which would not arouse

public prejudice too much, and at the same time do away with the present unnecessary publicity. The committee believes that no person should be declared insane, and committed to a hospital for the insane, unless after the finding of a commission, appointed by a Judge of a Court of Record. Such commission should be composed of two physicians and one lawyer. This commission should have the power to take testimony and send for witnesses. The finding of the committee should be approved by the Judge of the Court of Record appointing it, and the person whose insanity is questioned should have the right to be represented by counsel chosen by the court, if he so desire. No physician should be appointed to such commission who has not been ten years in the practice of his profession and is not in good standing in the school of medicine to which he belongs; said good standing to be certified to by a medical society of the county in which he resides. At least one of the physicians should be an alienist, and his qualifications should be determined by the fact that he has been one or more years physician in a hospital for the insane, or has other special qualifications. Evidence of these qualifications must be submitted to the State Board of Health, which should issue a certificate that the applicant is a qualified alienist. No lawyer should be appointed to such commission unless he has been ten years in the reputable practice of his profession. No person should be discharged from any institution for the insane unless by a formal legal process, setting aside the finding which determined his insanity, or upon the application of friends, who should then be required to give such bonds, based on real estate, as the Judge of the Court of Record—to whom all such applications should be referred—shall deem necessary for the security of the public; but no person, not deemed recovered from insanity by the superintendent, should be dis-

charged from any institution unless his or her friends have given bonds for their pecuniary responsibility for the results of his or her acts. The committee believes that no Justice of the Peace should permit any insane person or idiot to go at large, who has ever been brought before him on a criminal charge, but should straightway commit such lunatic or idiot to await the action of a commission, for which he should make immediate application to the Judge of the nearest Court of Record. In case such action is neglected, such Justice of the Peace should be held pecuniarly responsible for the results of such lunatic's or idiot's actions. All State institutions for the insane, and county institutions containing more than one hundred patients, should be placed under the control of the State Board of Charities, which should have the powers now delegated to trustees and other supervisory officials, connected with all such institutions. It should be the duty of each medical society of every county to appoint from its members gentlemen, qualified to act on commissions of lunacy. One representative, who with a similar representative from the bar association of the county, should constitute an inspection committee, which should examine monthly every institution for the insane and each recently admitted patient, and report the result of such examination to the State Board of Charities, which should take measures to remedy any abuses which might exist, and should, on the representation of such committee, transfer an insane person from a county to a State institution. All expenses of this inspection should be paid by the county.

No act which is the offspring of disease should be regarded as a crime. Any defense of insanity for crime should be allowed to be raised only at or before indictment, and the person, on whose behalf such a plea is raised, should be instantly transferred to a State institution for the insane and there kept

under surveillance until his trial. The question of his insanity should be tried first before a jury composed of one-third physicians, qualified to act on lunacy commissions, one-third lawyers of equal competency, and one-third of citizens drawn as jurymen, as in ordinary criminal trials; but no one should be competent to serve on such a jury who has a prejudice against insanity as a defense for crime. If such jury find the prisoner insane, he shall be committed to a State institution for the insane for two years, and, at the expiration of that time, if the superintendent deem him recovered, the finding of the jury should be set aside by a lunacy commission, chosen in the way already mentioned. If the jury fail to find him insane, he shall stand his trial for the crime, and should not be allowed to plead insanity as a defense. No medical or legal officer of an institution for the insane should be qualified to sit upon any lunacy commission while he retains his office.

V. The indecent quack advertisements can be summarily dealt with in the manner prescribed in Pennsylvania. The Pennsylvania act is as follows: "Any person who shall publicly advertise in any way treatment of venereal disease, of youthful indiscretion, prevention of conception, of impotence, of self-abuse, or treatment of urinary disease, shall be deemed guilty of a misdemeanor, punishable by fine or imprisonment, or both."

VI. The committee also believe that any person convicted of practicing under an alias should be prohibited from future practice in this State.

Respectfully submitted,

JAS. G. KIERNAN, M. D., Chairman,
E. INGALLS, M. D.,
O. C. DEWOLF, M. D.,
Committee.

CHICAGO MEDICAL SOCIETY.

Regular meeting, 16th June, 1884. The President, Dr. D. A. K. Steele, in the chair.

The following papers, essays and reports of cases were presented: The Significance of Jaundice in Diagnosis, by Dr. Wm. E. Quine. The Effect of Noises upon Certain Forms of Deafness, Dr. G. F. Hawley. A Case of Genito-Urinary Surgery and Median Lithotomy, Dr. William L. Axford. Pathological Specimens of Papillomatous Ovarian Cystic Tumors, Dr. Charles T. Parkes.

The following is a brief synopsis of Dr. Quine's paper on "The Significance of Jaundice in Diagnosis:"

1. Jaundice occurring suddenly, in apparent health, and painlessly, is usually of emotional origin, and transitory.

2. When it depends on disease or injury of the brain, acute atrophy of the liver, snake poison, or an infectious fever, it is always associated with mental disturbance.

3. If it be attended with fever, and well marked, it is secondary to inflammation of biliary passages, pneumonia, toxæmia, or infective inflammation of the portal vein.

4. If it occur suddenly, and is preceded by paroxysmal pain and vomiting, it is caused, nine times out of ten, by biliary calculi.

5. If it be preceded by typical symptoms of gastro-duodenal inflammation, it is obviously of catarrhal origin.

6. Impassable obstruction of the common duct is shown by great intensity of jaundice, clay-colored stools, and in recent cases by distension of the gall-bladder.

7. Jaundice, caused by sudden obstruction of the biliary passages, is always associated with paroxysmal pain and nausea, but there is no means of ascertaining the nature of the obstructing body, except its discovery in the stools.

8. In the rare cases of sudden obstruction by cancerous, hydatid and aneurismal tumors, there is almost always a history of impaired health, enlargement and deformity of the liver, ascites, etc., which, aided by the revelations of physical exploration, will lead to correct differentiation.

9. Sudden return of normal coloring to fæces confirms the diagnosis of obstruction.

10. Occlusion of the cystic duct may be attended with as much pain, nausea, and distension of the gall-bladder, as occlusion of the common duct, but there is no jaundice. In occlusion of the hepatic duct, the same symptoms are present, including jaundice, and excluding distension of the gall-bladder It is often impossible to distinguish between occlusion of the hepatic and the common duct. The former is rare because the duct increases in size from above downward.

11. If jaundice persist after the symptoms of biliary colic or catarrhal inflammation have a month since disappeared; or if jaundice have disappeared after a biliary colic, to return slowly and painlessly, it may be assumed that stricture of the duct has resulted from inflammatory thickening, adhesion of walls, or cicatrization of an ulcer.

12. A history of repeated attacks points to the probability of gall stones.

13. If jaundice come on slowly, without antecedent colic, or catarrh, and without attendant evidence of impaired health or portal obstruction, it is probably caused either by pressure

upon the duct, or by the growth of a tumor within its walls. The pressing body, when large enough, may be readily appreciated, as in the case of pregnancy, ovarian tumor, aneurism, distended colon, etc., but when it is small, or constituted by enlargement of lymphatics in the fissure of the liver, it is apt to escape detection.

14. Slight but persistent jaundice may be due to incomplete occlusion of the common duct, or to complete occlusion of a branch of the hepatic; but usually it is found associated witheither valvular disease of the heart, some disease of the lungs which obstructs circulation, or cirrhosis of the liver.

15. If ascites be associated with it, the disease is either cirrhosis or cancer of the liver. If the liver be abnormally small, the disease is cirrhosis; if it be large, the disease is either hypertrophic cirrhosis or cancer. Differentiation between the two is seldom attended with difficulty.

16. Absence of jaundice does not imply absence of hepatic disease, since the liver may be destroyed by disease, or extirpated by operation, without jaundice ensuing.

17. It is not a prominent symptom of hepatitis, if catarrhal inflammation of biliary passages be excluded. It is not characteristic of hepatic abscess, where, at most, mere muddiness of the complexion is usually seen. These affections are rare in temperate climates, and when encountered, are generally found to be secondary to direct injury of the liver, or to infective inflammation of the portal vein. It is not a symptom of waxy or fatty liver, or of hydatids, excepting as an extraordinary complication.

The paper was ably discussed by Drs. G. C. Paoli, S. H. Stevenson, J. J. M. Angear, A. R. Jackson, J. H. Etheridge,

C. T. Fenn, and R. Tilley. The discussion was closed by Dr. Wm. E. Quine.

A paper upon "The Effect of Noises upon Certain Forms of Deafness" was read by Dr. G. F. Hawley. This paper has already appeared in a former number of the JOURNAL.

Comments upon the paper were made by Professor S. J. Jones and Dr. R. Tilley, and the discussion closed by Dr. Hawley.

MEDIAN LITHOTOMY.

This operation was performed by Dr. Wm. L. Axford, who verbally cited the history of the following case of genito-urinary trouble. An old man, ætat 66, of inherited gouty diathesis, gardener,had been during the last year and a half a sufferer from repeated attacks of nephralgia, which could only be relieved by hypodermics of morphia sulphas gr. ¼. After several attacks this remedy seemed to have no effect in affording him relief, neither did suppositories of belladonna and other anodynes appear to have any control over the pain. He was also a sufferer from chronic cystitis. Some time since, the patient was again seized with the kidney trouble and cystic, combined, which continued three days; his urine was voided in small quantities, very often, as frequently as every five minutes, part of the time. The bladder was full continuously, and catheterization was resorted to every six hours. This produced excessive pain, which continued in spite of large doses of opium, for four hours afterwards. Hyperæsthesia of the uretha became very marked, and the procedure of using the catheter had to be abandoned. It was also ascertained that he

had an enlarged prostate. As a last resort the operation for median lithotomy was done, which very much relieved him, and thus he was saved the torture of many catheterizations A drainage tube was inserted; this had to be frequently removed and freed from the deposits of phosphates and retention of mucus. The urine was excessively ammoniacal and fœtid. But the patient survived only a few days. Autopsy; cirrhotic, gouty liver and kidneys, cystitis of aggravated and obstinate form, enlarged prostate, etc.

The speaker thought he was warranted in making the median incision in the case, he reported, and should do so again under similar circumstances.

Dr. T. C. Parkes supported Dr. Axford in what he had done in the case. He then briefly alluded to two cases of a similar nature,—relieved by this method,—that remained so for six months. Dr. Parkes then gave an interesting verbal report of a case, and also exhibited the specimen, which consisted of papillomatous, multilocular cysts of both ovaries. The cysts had ruptured, and discharged their contents into the peritoneal sac. The history of enlargement embraces a period of only six months. The patient stated she never had an illness previous to the commencement of the abdominal enlargement. She has emaciated rapidly and to great extent. The patient measured 44 inches in circumference at height of umbilicus. The greatest difficulty in the case was the differentiation between ascites and ovarian cysts. There was no œdema, nor had there ever been, of the lower extremities. Percussion gave dullness in all positions—lying, standing, or sitting, the only place of resonance being in the epigastrium. Fluctuation was very distinct on the slightest touch in all directions. Pel-

vic examination revealed that fluctuation was not to be felt in the pelvis. By this means, was also determined the presence of a small growth about the size of the closed fist on the right side. The uterus was displaced forward, close behind the pubes; *cul de sac* of Douglas filled with foreign body. *Diagnosis:*—Ovarian tumor; ruptured sac; contents emptying into peritoneal sac. *Operation:*—22 quarts of fluid were evacuated from the abdomen and tumors; fluid of a dark amber color. No large amount of lymph was precipitated in it after standing. Both ovaries were found diseased, there being present in the left side a ruptured papillomatous tumor. It still contained some fluid, which could not be pressed out at the site of papillary growth. The right one had not ruptured, but was bound down deeply in the pelvis by adhesion. The pelvis was filled by these tumors and their adhesions. After much trouble, the tumors were enucleated and removed, which were, at this point, shown to the members. The operation was done recently, and during the first four days the temperature of the patient had not reached 100° F. She was strong and cheerful, and she was doing well in every respect, but was not yet out of danger. Bleeding was quite free immediately after the separation of the adhesions, but soon ceased altogether under pressure with dry sponges. A drainage-tube was left in the lower end of the incision down to the floor of the pelvis, anticipating free discharge from such an extensive raw surface. The drain off was very free through it for two days. The sigmoid flexure of the colon was adherent for two inches to one of the cysts. For the past two days the temperature was normal.

Dr. A. R. Jackson remarked: The distention by the fluids, in this case, prevented the intestines from rising to the highest

point in the abdomen; and it required, he thought, great skill on the part of the operator to differentiate such a case from one of ascites, hydronephrosis, or ovarian tumor, although before proceeding to operate, an examination of the fluid would have determined it to be ovarian or otherwise. Drysdale has made 2,500 examinations, and, with but one or two exceptions (the speaker thinks), has succeeded in finding the characteristic pathognomonic cell in ovarian cystic fluid. L. H. M.

MARINE HOSPITAL SERVICE.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE. *April 1st to June 30, 1884.*

Bailhache, P. H., Surgeon. Detailed as chairman of Board to examine candidate for appointment into the Revenue Marine Service, May 17, 1884.

Vansant, John, Surgeon. To proceed to Empire City, Oregon, as inspector, April 2, 1884.

Hutton, W. H. H., Surgeon. Granted leave of absence for twenty-five days, May 14 and June 9, 1884.

Miller, T. W., Surgeon. Granted leave of absence to attend the meeting of the American Medical Association, May 1, 1884. To proceed to Pittsburgh, Pa., Ashtabula, Ohio, Buffalo, N. Y., and Detroit, Mich., as inspector, May 10, 1884.

Wyman, Walter, Surgeon. To proceed to Crisfield, Md., as inspector, April 11, 1884. Detailed as president of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 20, 1884. To examine cadet graduates Revenue Marine Service as to physical qualifications, May 31, 1884.

Detailed as member of Commission to inspect United States buildings at quarantine station on the Delaware River, June 16, 1884.

Wyman, Walter, Surgeon. Detailed to represent the Marine Hospital Service as delegate to the American Medical Association, April 17, 1884.

Austin, H. W., Surgeon. Granted leave of absence to attend the meeting of the American Medical Association, May 2, 1884.

Gassaway, J. M., Surgeon. When relieved by P. A. Surgeon Mead to proceed to Portland, Maine, and assume charge of the Service, April 16, 1884.

Granted leave of absence for thirty days, May 28, 1884.

Stoner, G. W., Passed Ass't Surgeon. When relieved by Surgeon Gassaway to proceed to Cairo, Ill., and assume charge of the Service, April 16, 1884.

When relieved by Surgeon Gassaway, to report in person to the Surgeon-General, June 20, 1884.

Irwin, Fairfax, Passed Ass't Surgeon. Granted leave of absence for twenty-one days, June 19, 1884.

Mead, F. W., Passed Ass't Surgeon. When relieved by Ass't Surgeon Devan, to proceed to Philadelphia, Pa., and assume charge of the Service, April 16, 1884.

Detailed as recorder of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 20, 1884.

Carter, H. R., Passed Ass't Surgeon. To inspect unserviceable property at the San Francisco Hospital, May 24, 1884.

Wheeler, W. A., Passed Ass't Surgeon. To inspect unserviceable property at the Chicago Hospital, May 24, 1884.

Benson, J. A., Passed Ass't Surgeon. Granted leave of absence for thirty days, April 14, 1884.

When relieved by P. A. Surgeon Stone, to report to him for temporary duty, May 19, 1884.

Banks, C. E., Passed Ass't Surgeon. Detai led as member of

Board to examine physically candidate for appointment into the Revenue Marine Service, May 17, 1884.

To inspect unserviceable property at Baltimore, Md., New York, N. Y., and Boston, Mass., May 26 and June 2, 1884.

Bennett, P. H., Ass't Surgeon. Granted leave of absence for twenty days, June 28, 1884.

Devan, S. C., Ass't Surgeon. To proceed to Port Townsend, W. T., relieve P. A. Surgeon Mead, and assume charge of the Service, April 14, 1884.

Urquhart, F. M., Ass't Surgeon. Granted leave of absence for thirty days, May 22, 1884.

Yemans, H. W., Ass't Surgeon. To report to Capt. M. A. Healey for duty as medical officer during cruise of Revenue Cutter "Corwin," April 16, 1884.

Glennan, A. H., Ass't Surgeon. To proceed to Mobile, Ala., for temporary duty during sickness of P. A. Surgeon Goldborough, June 17, 1884.

APPOINTMENT.—Brooks, Stephen D., M. D., of Massachusetts, having passed the examination required by the Regulations, was appointed as Assistant Surgeon by the Secretary of the Treasury, May 15, 1884.

(Dr. Brooks had previously served as an Acting Assistant Surgeon, from March, 1883, to May, 1884.)